PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-11

SHEET 1 OF 2

FILE: 914206
DATE: Dec. 28, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 34.9"
Long. 92° 42' 02.3"

Surface Elevation: 84.4 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			1.00 (P)							Stiff brown **CLAY** (CH)		
			1.25 (P)	1.26	118	94		T4 25 57	43	- with roots and organics	4.0	
5			0.25 (P)							Soft to very soft brown **SILTY CLAY** (CL)		
			0.00 (P)	0.30	115	89		29				
			0.00 (P)									
10			0.00 (P)									
			2 b/18" 1-1-0							- more clayey (CL-CH) below 12'		
15			1 b/18" 0-0-1					15 38 33	23		18.0	
			1 b/18" 0-1-0									
			1.25 (P)							Firm to stiff gray **CLAY** (CH)		
20			1.00 (P)	0.64	106	75		18 42 86	68			
			0.75 (P)									
25			1.00 (P)									
			0.75 (P)									
			0.75 (P)							- dark gray below 28'		
30			1.25 (P)									
			1.25 (P)									
35			1.50 (P)									
			0.50 (P)									
			0.25 (P)					17 64 T67	150		47.0	
40												
			0.25 (P)									
45												
50										WOOD with clay		

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

- First encountered at 8 ft.
- Rose to 5.6 ft. after 10 min.

Advancement Method

Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 100'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

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AQ LOG Stock

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-11

SHEET 2 OF 2

FILE: 914206
DATE: Dec. 28, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 34.9"
Long. 92° 42' 02.3"

Surface Elevation: 84.4 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
55								92		WOOD with clay *(continued)*	58.0	
60			0.50 (P)							Firm gray very SANDY CLAY to CLAYEY SAND (CL-SC)		
65			1.25 (P)					T4 23 19	9			
70			1.00 (P)								72.0	
5			0.50 (P)					17 22 23	5	Firm light gray SILTY CLAY (CL) - with sand	77.0	
80			0.25 (P)				16	19		Medium dense light gray CLAYEY, SANDY SILT (ML)	79.5	
										Gray SILTY SAND (SM)	82.0	
85			2.50 (P)							Very stiff gray CLAY (CH)	87.0	
90			4.50+ (P)							Very stiff gray very SANDY CLAY (CL-SC)	92.0	
95			4.50+ (P)					23 27 52	29	Hard gray CLAY (CH)		
100			4.50+ (P)							Boring Terminated at 100 Feet.	100.0	

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 8 ft.
▽ Rose to 5.6 ft. after 10 min.

Advancement Method

Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 100'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

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AU LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-12

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 15, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 30.4"
Long. 92° 42' 12.7"

Surface Elevation: 83.9 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			3.50 (P)							Stiff red SILTY CLAY (CL) - with roots	2.0	
			1.00 (P)							Loose red CLAYEY SILT (ML)	4.0	
5			2.00 (P)	0.70	112	85		20 – 31 – 54	34	Firm red CLAY (CH) - with silt seams	8.0	
		▽	1.25 (P)									
			0.75 (P)					19 – 24 – 28	9	Loose red CLAYEY SILT (ML)		
10			0.50 (P)									
			WOH							- with sand below 12'		
15			WOH									
			WOH				63	32				
			WOH									
20			WOH								22.0	
			WOH							Very soft to soft red and brown SILTY CLAY (CL)		
			WOH									
25			0.75 (P)									
			0.75 (P)	0.28 (t)	118	92		16 – 28 – 31	15			
30			WOH									
			WOH									
35			0.75 (P)									
			0.75 (P)	0.36 (t)	106	79		22 – 35 – 42	20			
40			WOH								40.0	
										Boring Terminated at 40 Feet.		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 7 ft.
No rise after 15 min.

Advancement Method

Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

WOH: weight of hammer
t: Unconsolidated, undrained triaxial compression test at overburden pressure.

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AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-13

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 16, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 30.4"
Long. 92° 42' 07.5"

Surface Elevation: 81.7 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit / Moisture Content / Liquid Limit)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			4.00 (P)							Firm to stiff red and brown SILTY CLAY (CL)		
			2.50 (P)	0.71	117	93		15 / 41 / 26	26		4.0	
5		▽	0.25 (P)							Very soft red and brown very SILTY CLAY (CL-ML)		
			<0.25 (P)					17 / 29 / 30	12			
			0.25 (P)									
10			0.50 (P)									
			0.50 (P)									
15	X		WOH								16.0	
	X		WOH				85	28		Very loose red and brown CLAYEY SILT (ML) - with sand		
	X		WOH									
20	X		WOH								22.0	
			0.50 (P)							Soft red and gray very SILTY CLAY (CL)		
25			0.75 (P)									
			0.25 (P)									
	X		WOH									
30			1.00 (P)	0.71	117	90		16 / 47 / 30	31		32.0	
			1.50 (P)							Firm red and brown SILTY CLAY (CL)		
35			1.00 (P)									
			1.00 (P)								38.0	
	X		WOH				42	31		Very loose red and brown very SILTY fine SAND (SM-ML)	40.0	
40										**Boring Terminated at 40 Feet.**		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 4.6 ft

Hole fell in 4.6 ft after 15 min.

Advancement Method

Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

WOH: weight of hammer

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AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-14

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 27, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 30.4"
Long. 92° 42' 02.3"
Surface Elevation: 84.1 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			3.00 (P)							Stiff brown **CLAY** (CH)		
			3.75 (P)								4.0	
5		▽	0.00 (P)					17 27 24	10	Very soft brown **SILTY CLAY** (CL) - with sand		
			1 b/18" 1-0-0									
			1 b/18" 1-0-0									
10			1 b/18" 1-0-0									
			1 b/18" 1-0-0				89	34				
			1 b/18" 1-0-0									
15			7 b/f 3-3-4							- loose at 16' - 18'		
			2 b/f 1-1-0									
20			0.00 (P)									
			0.00 (P)					15 29 23			23.0	
5			3 b/18" 1-2-0						14	Very loose red very **SILTY fine SAND** (SM)		
			4b/f 2-2-2									
			1 b/18" 1-0-0									
30			7 b/f 3-3-4									
			7 b/f 2-3-4							- with silty clay (CL) layer at 32'		
35			5 b/f 2-2-3							- less silty below 34'		
			19 b/f 4-7-12				19	24				
			24 b/f 10-12-12									
40											40.0	
										Boring Terminated at 40 Feet.		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 5.5 ft
No rise after 15 min.

Advancement Method

Short-flight Auger: 0' - 6'
Rotary Wash: 6' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

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AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-15

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 29, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 30.4"
Long. 92° 41' 57.1"

Surface Elevation: 85.6 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
5		▽	0.25 (P) 0.50 (P)				91	20		Loose red **SANDY SILT** (ML)		
			5 b/18" 0-2-3								8.0	
			4 b/f 2-2-2							Soft to firm red **CLAY** (CH)		
10			0.50 (P)	0.86	108	76		30 — 43 — 91T	61			
			1.00 (P)									
15			0.50 (P)							- with wood at 14' - 16'		
			1.25 (P)									
			1.00 (P)									
20			1.50 (P)					38				
			1.25 (P)									
25			1.50 (P)									
			0.50 (P)									
			0.25 (P)					21 — 42 — 105	84			
30			1.25 (P)							- with organic matter below 30'		
			1.00 (P)									
35			0.50 (P)									
			0.50 (P)									
			0.50 (P)					83				
40											40.0	
										Boring Terminated at 40 Feet.		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 5 ft
▽ Hole fell in 4.5 ft after 15 min.

Advancement Method

Short-flight Auger: 0' - 6'
Rotary Wash: 6' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

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AQ LOG Stick

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-16

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 13, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 30.4"
Long. 92° 41' 51.9"
Surface Elevation: 89.5 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
0			3.00 (P)							Stiff red and brown **CLAY** (CH)		
			2.75 (P)	1.00	116	93		24, 25, 62	38			
5			1.75 (P)							- firm at 4' - 6'	6.0	
			1.75 (P)				87	27		Loose red and brown **SANDY SILT** (ML)	12.0	
10												
			1.00 (P)	0.36	120	98		16, 23, 43	27	Soft to firm red and gray **SILTY CLAY** (CL)		
15			2.75 (P)									
			3.00 (P)									
			2.00 (P)	0.87				25			20.0	
20			WOH				92	30		Very loose gray **CLAYEY SILT** (ML) - with sand	24.0	
			1.75 (P)							Firm brown **CLAY** (CH)		
25			2.00 (P)									
			1.50 (P)									
30			2.25 (P)									
			1.25 (P)	0.67	108							
35			0.75 (P)									
			1.50 (P)							- with wood at 36' - 38'		
			1.75 (P)								40.0	
40										**Boring Terminated at 40 Feet.**		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data
▽ First encountered at 9 ft.
No rise after 15 min.

Advancement Method
Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 40'

Abandonment Method
Hole backfilled with cement/bentonite grout upon completion.

Notes
WOH: weight of hammer

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208.GPJ AQUATERR.GDT 1/3/05
AQ LOG SHEET

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-17

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 14, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 26.0"
Long. 92° 42' 07.5"

Surface Elevation: 84.8 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			1.50 (P)							Firm to stiff red and brown slightly **SILTY CLAY** (CL-CH)		
			1.75 (P)									
5		▽	0.50 (P)	0.60	114	87		19 – 31 – 50	31			
			1.50 (P)									
			1.00 (P)								10.0	
10			0.00 (P)							Very loose brown **CLAYEY SILT** (ML) - with sand		
			0.00 (P)									
15			WOH				97 (g)	30				
			WOH									
			0.00 (P)							- more sandy (ML-SM) at 18' - 20'		
20			WOH									
			WOH				86	29				
25			0.00 (P)							- with silty clay (CL) layer at 25'		
			0.00 (P)									
30			WOH									
			WOH									
			WOH								34.0	
35			24 b/f 4-10-14				45 (g)	24		Medium dense red and gray **SILTY fine SAND** (SM)		
			35 b/f 8-17-18									
			23 b/f 11-13-10								40.0	
40										**Boring Terminated at 40 Feet.**		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 5 ft.
No rise after 15 min.

Advancement Method

Short-flight Auger: 0' - 10'
Rotary Wash: 10' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

g: see attached grain size curves

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AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-18

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 19, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 26.0"
Long. 92° 42' 02.3"

Surface Elevation: 84.9 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			1.00 (P)							Firm red **SILTY CLAY** (CL)		
			0.75 (P)								4.0	
5			0.75 (P)	0.51	111	90		21 26 24	5	Loose red **CLAYEY SILT** (ML)	6.0	
			0.00 (P)							Very loose red **CLAYEY, SANDY SILT** (ML)		
			0.00 (P)				77 (g)	27			10.0	
10			0.00 (P)							Very soft red very **SILTY CLAY** (CL-ML)		
			WOH								14.0	
15			WOH							Very loose red **CLAYEY, SANDY SILT** (ML)		
			WOH									
			WOH				64	25				
20			WOH									
			1 b/f									
25			3 b/f									
			WOH									
			8 b/f 1-1-7				66	26		- loose at 28' - 30'	30.0	
30			27 b/f 7-13-14							Medium dense red **SILTY fine SAND** (SM)		
			4 b/f 3-1-3							- loose at 32' - 34'		
35			23 b/f 3-11-12					22				
			28 b/f 9-12-16								38.0	
			23 b/f 9-11-12				15	23		Medium dense red **SANDY SILT** (ML)	40.0	
40										**Boring Terminated at 40 Feet.**		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data
☒ Water at ground surface

Advancement Method
Rotary Wash: 0' - 40'

Abandonment Method
Hole backfilled with cement/bentonite grout upon completion

Notes
g: see attached grain size curves
WOH: weight of hammer

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AQ LOG SHEET 206.GPJ AQUATERR.GDT 1/3/05

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG
No. B-19
SHEET 1 OF 1

FILE: 914206
DATE: Dec. 19, 2004
DRILLER: R. Warren
TECH.: M. Donald
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 26.0"
Long. 92° 41' 57.1"
Surface Elevation: 84.5 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit / Moisture Content / Liquid Limit)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			4.50 (P)							Stiff to very stiff red **CLAY** (CH)		
			1.50 (P)									
5			1.25 (P)	1.27	111	83		18 / 34 / 72	54			
			0.25 (P)								6.0	
										Soft to firm red **SILTY CLAY** (CL)		
											8.0	
			0.00 (P)							Very loose red **SANDY SILT** (ML) - with clay		
10			0.00 (P)				76	28				
			1 b/f 1-1-0									
15			1 b/18"									
			1 b/18"									
			WOH				70	26				
20			1 b/18" 1-1-0									
			WOH									
25			2 b/f 1-1-1									
			1 b/18" 1-1-0									
			1 b/18" 1-1-0									
30			5 b/f 2-2-3									
			2 b/f 1-1-1							- loose at 32' - 34'		
35			2 b/f 1-1-1									
			5 b/f 3-2-3							- loose at 36' - 38'		
			3 b/f 1-2-1							- more sandy (ML-SM) at 38' - 40'		
40							52	24			40.0	
										Boring Terminated at 40 Feet.		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data
▽ First encountered at 9 ft
Rose to 8 ft. after 10 min.

Advancement Method
Short-flight Auger: 0' - 12'
Rotary Wash: 12' - 40'

Abandonment Method
Hole backfilled with cement/bentonite grout upon completion

Notes
WOH: weight of hammer

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206.GPJ AQUATERR.GDT 1/3/05
AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-20

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 14, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 25.9"
Long. 92° 41' 51.9"

Surface Elevation: 95.2 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit / Moisture Content / Liquid Limit)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
5			1.50 (P)					24 / 32 / 73	49	Firm to stiff red **CLAY** (CH) - with silt traces		
			0.75 (P)									
			2.00 (P)	0.58	116	89		30				
			2.50 (P)								8.0	
10		▽	1.25 (P)							Soft red very **SILTY CLAY** (CL-ML) - with sand		
		▽	0.50 (P)									
			0.75 (P)	0.46	117	93		19 / 28 / 26	9		14.0	
15			0.75 (P)							Very loose to loose red **CLAYEY SILT** (ML) - with sand		
			0.50 (P)									
20			WOH				93 (g)	30				
			0.00 (P)									
			0.75 (P)									
5			0.00 (P)									
			WOH								28.0	
30							65	22		Very loose red **SANDY SILT** (ML) - with clay		
			WOH								32.0	
			1.25 (P)							Very loose red **CLAYEY SILT** (ML) - with sand		
35			WOH				80	28				
			0.50 (P)									
40			WOH								40.0	
45										**Boring Terminated at 40 Feet.**		
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 9 ft.
▽ Hole fell in at 10.5 ft. after 10 min.

Advancement Method

Short-flight Auger: 0' - 12'
Rotary Wash: 12' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

g: See attached grain size curve

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'20it.GPJ AQUATERR.GDT 1/3/05

AU LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-21

SHEET 1 OF 2

FILE: 914206
DATE: Dec. 15, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 21.5"
Long. 92° 42' 02.3"
Surface Elevation: 84.6 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			3.50 (P)							Soft to firm red very SILTY CLAY (CL-ML)		
			1.00 (P)	0.49	112	94		17 27 19	10		4.0	
5			2.00 (P)							Loose red CLAYEY SILT (ML)		
			1.25 (P)					19				
			0.75 (P)									
10		▽	WOH							- very loose, with sand below 10'		
			WOH					28				
15			WOH									
			WOH									
			WOH							- sandy silt (ML) below 18'	20.0	
20			6 b/f 2-3-3				49 (g)	30		Loose to very loose red SILTY fine SAND (SM)		
			2 b/f 1-1-1									
5			WOH									
			WOH									
			WOH								30.0	
30			28 b/f 5-13-15				23 (g)	28		Medium dense tan SILTY fine SAND (SM)		
35												
			22 b/f 6-8-14									
40												
			29 b/f 11-14-15									
45												
			15 b/f 7-8- -									
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data
▽ First encountered at 10 ft.
▽ Hole fell in at 10 ft. after 5 min.

Advancement Method
Short-flight Auger: 0' - 12'
Rotary Wash: 12' - 100'

Abandonment Method
Hole backfilled with cement/bentonite grout upon completion.

Notes
g: See attached grain size curves

aquaterra engineering

20kGPJ AQUATERR.GDT 1/3/05
AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-21

SHEET 2 OF 2

FILE: 914206
DATE: Dec. 15, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 21.5"
Long. 92° 42' 02.3"

Surface Elevation: 84.6 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
55			22 b/f 10-11--							Medium dense tan SILTY fine SAND (SM) *(continued)*	55.0	
60			14 b/f 6-8--				8 (g)	20		Medium dense to dense tan and gray medium SAND (SP)	62.0	
65			35 b/f 14-21--							Medium dense tan and gray SILTY fine SAND (SM)		
70			24 b/f 8-10-14				33	22			72.0	
75			1.25 (P)	0.86	126	108		10 27 17	17	Firm gray SANDY CLAY (CL)	78.0	
80			23 b/f 11-12--							Medium fense light gray fine SAND (SP) - with silt		
85			24 b/f 12-12--									
90			19 b/f 8-11--				8 (g)	21			90.0	
95			4.50+ (P)	4.95	105	77		30 64 36	34	Hard gray CLAY (CH) - with silt		
100			50+ b/f							Boring Terminated at 100 Feet.	100.0	

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data
▽ First encountered at 10 ft.
▽ Hole fell in at 10 ft. after 5 min.

Advancement Method
Short-flight Auger: 0' - 12'
Rotary Wash: 12' - 100'

Abandonment Method
Hole backfilled with cement/bentonite grout upon completion.

Notes
g: See attached grain size curves

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206.GPJ AQUATERR.GDT 1/3/05

AQ LOG

PROJECT: Geotechnical Investigation
CLECO - Rodemacher Expansion
Lena, Louisiana

CLIENT: CLECO Corporation
Pineville, Louisiana

SOIL BORING LOG

No. B-22

SHEET 1 OF 1

FILE: 914206
DATE: Dec. 14, 2004
DRILLER: R. Warren
TECH.: J. Rummler
ENGINEER: V. Donald

Location: See Figure 2.
Lat. 31° 23' 21.5"
Long. 92° 41' 57.1"

Surface Elevation: 87.6 ±

Depth (feet)	Samples	Groundwater Level	Field Test Results	Undrained Shear Strength (ksf)	Unit Weight (pcf) Moist	Unit Weight (pcf) Dry	Percent Fines	Natural Moisture Content and Atterberg Limits (Plastic Limit – Moisture Content – Liquid Limit; 20 40 60 80)	Plasticity Index PI	DESCRIPTION	Strata Break Depth	Soil Type
			1.75 (P)							Stiff red and brown slightly **SILTY CLAY** (CL-CH)		
			1.25 (P)	1.87	122	99		19, 50, 23	31		4.0	
5			WOH							Very loose red **CLAYEY SILT** (ML)	6.0	
			2.25 (P)							Stiff red **CLAY** (CH)		
			3.25 (P)								10.0	
10			3.50 (P)							Stiff red **SANDY CLAY** (CL)	12.0	
			2.00 (P)							Firm red very **SILTY CLAY** (CL-ML)		
			2.00 (P)					12, 31, 14	19			
15		▽										
			WOH							- very soft below 18'		
20												
			WOH				87	32		- with sand from 22' - 24'		
5			WOH									
			WOH									
30			WOH									
			WOH									
			WOH								34.0	
35			WOH							Very loose red **SANDY SILT** (ML)		
			WOH				66 (g)	26				
40			WOH								40.0	
										Boring Terminated at 40 Feet.		
45												
50												

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

▽ First encountered at 18 ft.
No rise after 15 min.

Advancement Method

Short-flight Auger: 0' - 20'
Rotary Wash: 20' - 40'

Abandonment Method

Hole backfilled with cement/bentonite grout upon completion.

Notes

g: See attached grain size curves

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AU LOG

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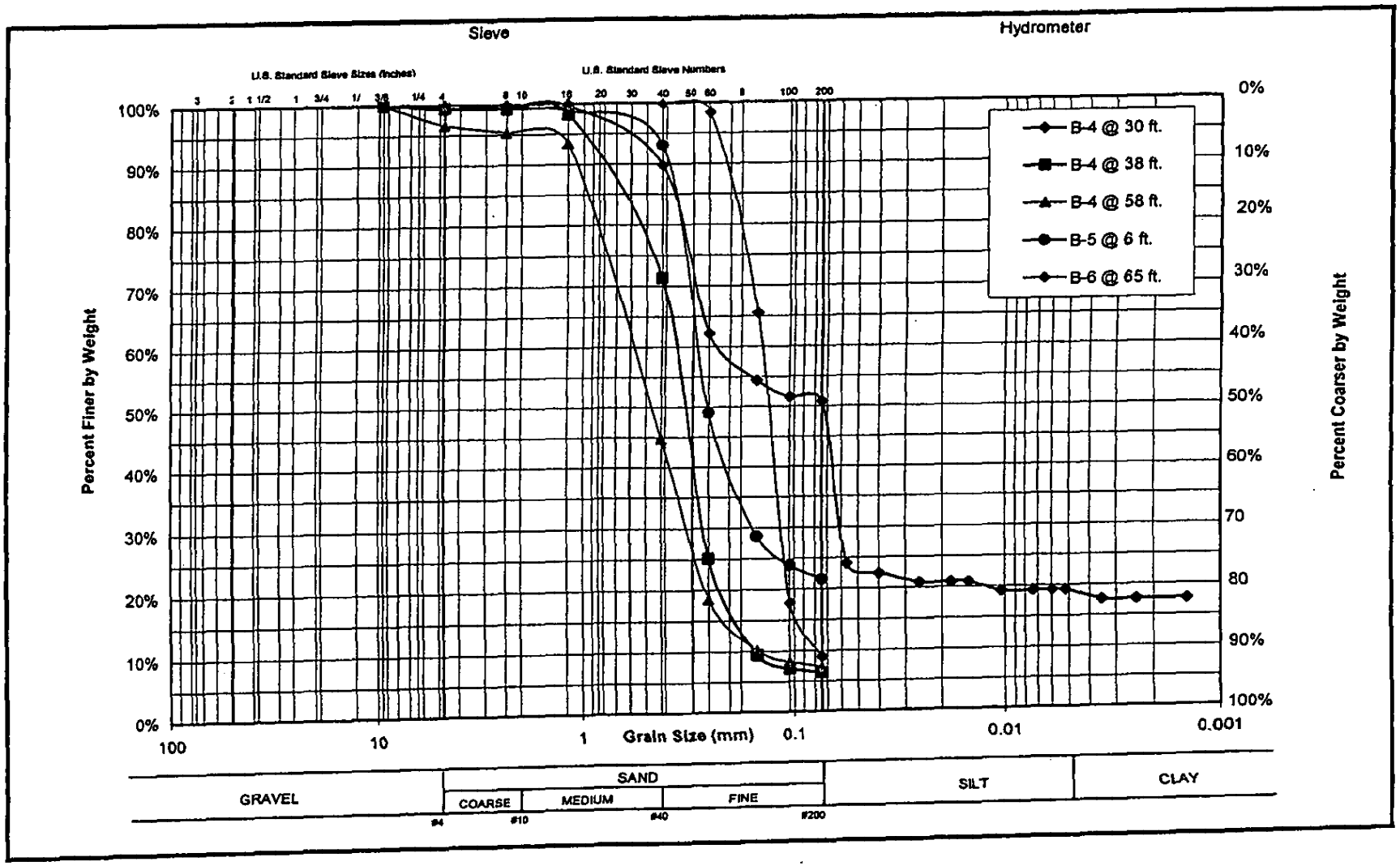
Grain Size Curves

Construction Monitoring Services

CLECO - Rodemacher Power Station

914206



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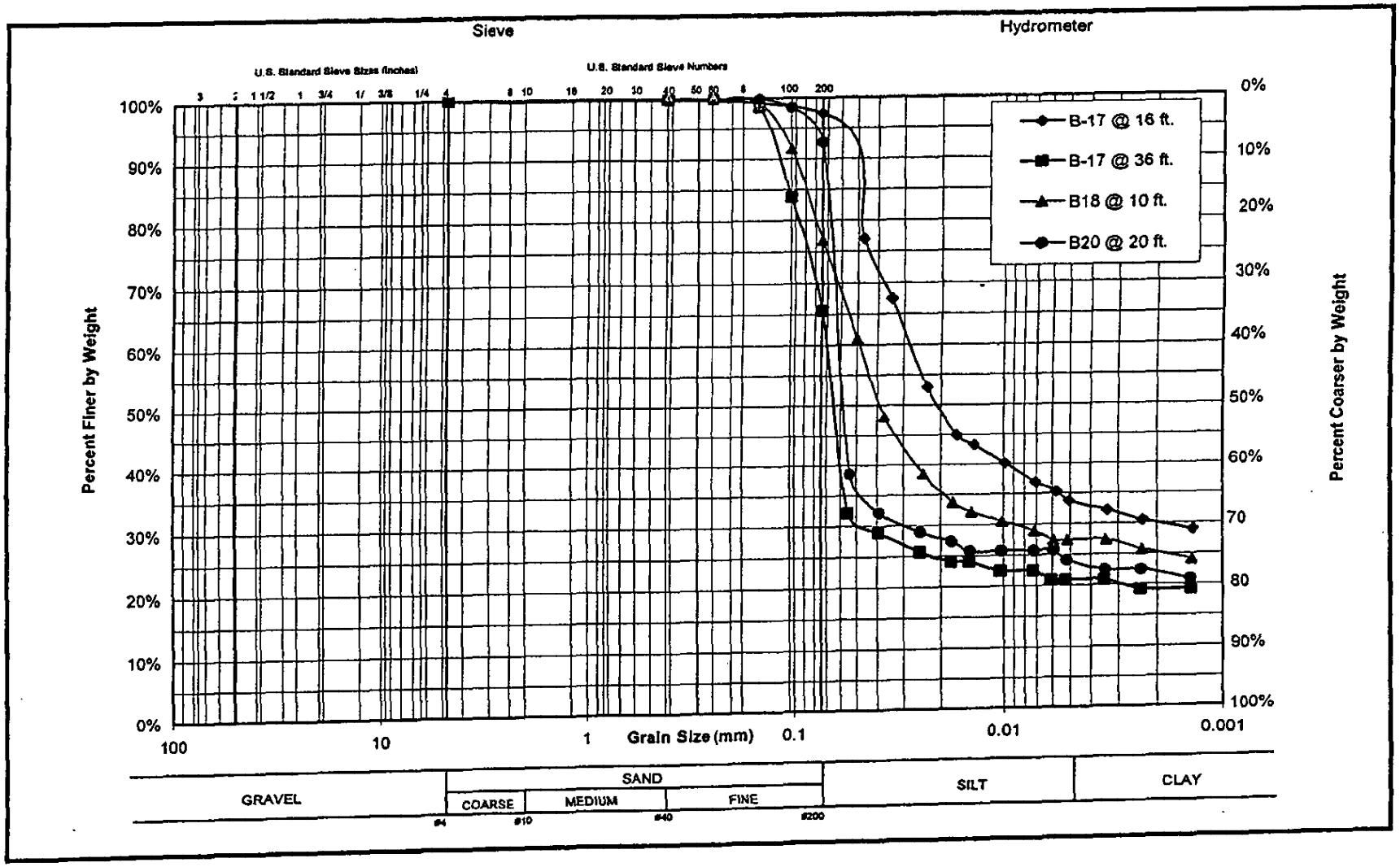
Grain Size Curves

Construction Monitoring Services

CLECO - Rodemacher Power Station

914206



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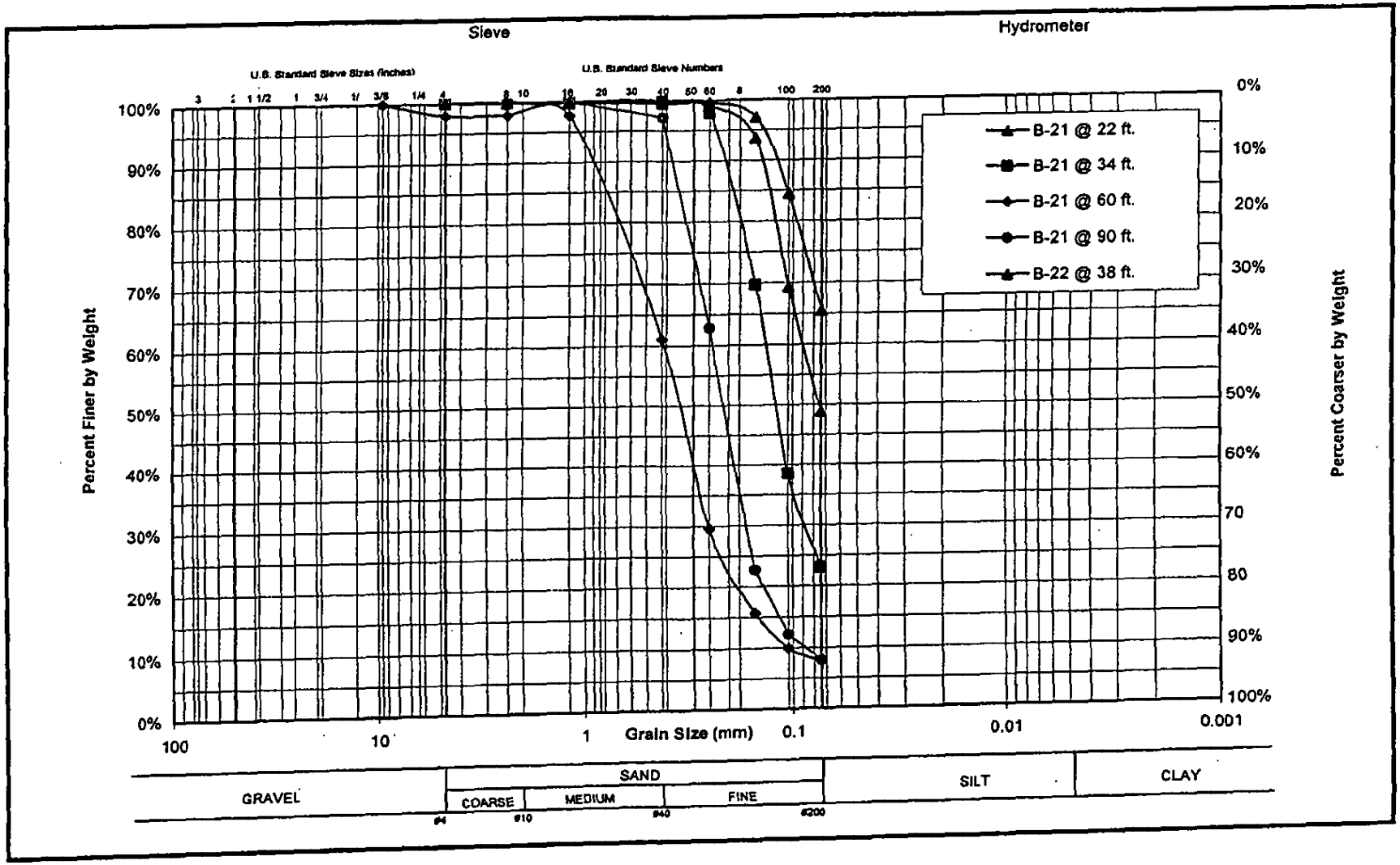
Grain Size Curves

Construction Monitoring Services

CLECO-Rodemacher Power Station

914206



SOIL BORING LEGEND

FIELD DATA | **LABORATORY DATA**

Depth (feet) | Samples | Groundwater Level | Field Test Results | Undrained Shear Strength (ksf) | Unit Weight (pcf): Moist, Dry | Other/ Percent Finer | Natural Moisture Content and Atterberg Limits (Plastic Limit, Moisture Content, Liquid Limit; 20 40 60 80) | Plasticity Index: PI

Location: Coordinate (North & East)

Latitude Longitude

Surface Elevation: Elev.

DESCRIPTION | Soil Type

5

10

15

20

25

1.00

35 b/f
17-17-18

1.00

Auger Sample

Pocket penetrometer reading

Shelby Tube Sample

Standard Penetration Test (blows/foot)

Split Spoon Sample

No Recovery

Rock Core Sample

Probe Core Sample

TERMS DESCRIBING CONSISTENCY

Noncohesive Soils

(includes gravels, sands and silts) Consistency determined by Standard Penetration Resistance

Descriptive Term	Standard Penetration Resistance (blows per foot)
Very Loose	less than 4
Loose	5 to 9
Medium Dense	10 to 29
Dense	30 to 50
Very Dense	above 50

Cohesive Soils

(includes clays) Consistency determined by laboratory shear strength testing or by field visual-manual procedures.

Descriptive Term	Undrained Shear Strength (kips per sq. ft.)
Very Soft	less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 1.00
Stiff	1.00 to 2.00
Very Stiff	2.00 to 4.00
Hard	above 4.00

FIELD TESTING

Standard Penetration Testing	Pocket Penetrometer
The penetration resistance is the number of blows required to drive the split-spoon sampler the final 12 inches of penetration.	Strength estimates of relatively undisturbed samples are obtained by penetrometer readings. The measured units are in tons per square foot (tsf).

NOTES REGARDING SOIL DESCRIPTION

Soil descriptions provide classifications according to ASTM D2487 - Classifications of Soils for Engineering Purposes. Where laboratory data are available for shear strength and for classification verification, the data are utilized. Where no laboratory data exist, the descriptions are based upon the field classifications as made during the exploration according to ASTM D2488 - Description and Identification of Soils (Visual - Manual Procedure).

Soil structure as described on the boring logs can be defined as follows:

- *Layer:* A soil deposit with a thickness in excess of one inch
- *Seam:* A soil layer with a thickness of less than one inch.
- *Homogeneous:* Having the same color and appearance throughout and lacking fissures.
- *Fissured:* Having definite planes of discontinuity within a soil mass.
- *Slickensided:* A fissured condition with fracture planes that appear polished and glossy.
- *Jointed:* A fissured condition with fracture planes that are numerous and limited in extent.
- *Laminated:* Numerous thin seams of soil types which vary in texture or color.
- *Calcareous:* Containing obvious quantities of calcium carbonate.
- *Indurated:* Hardened by pressure or cementation.
- *Friable:* Easily crumbled.
- *Organic:* Containing remains of living organisms.

CONCRETE

FILL

CLAY

SANDY SILT

CLAYEY SAND

CLAYEY SILT

SAND

SILTY SAND

SILTY CLAY

CLAYEY SILT/SILTY CLAY

SANDY CLAY

GRAVEL

STRATA BOUNDARIES MAY NOT BE EXACT

Groundwater Level Data

- Water initially encountered during dry augering
- Groundwater level after a specified observation period
- Stabilized water level after an extended period of observation

Actual depth to water may vary from the conditions observed in the borings. The presence of groundwater is masked in borings advanced by rotary wash methods.

Advancement Method

Description of methodology used to advance soil boring.

Abandonment Method

Description of methodology used to abandon or fill the completed borehole.

Notes

Notes describing other laboratory tests or surface conditions.

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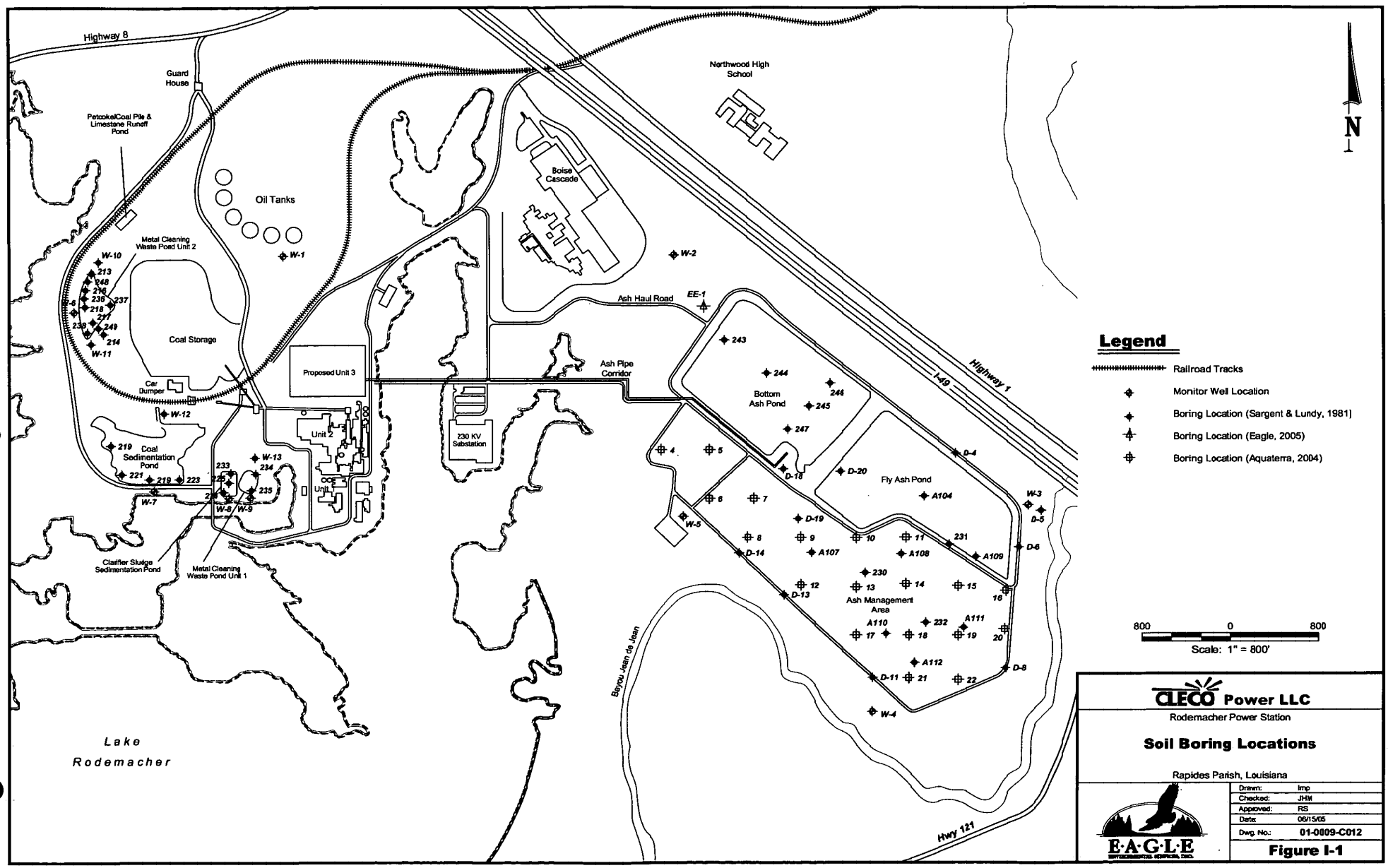
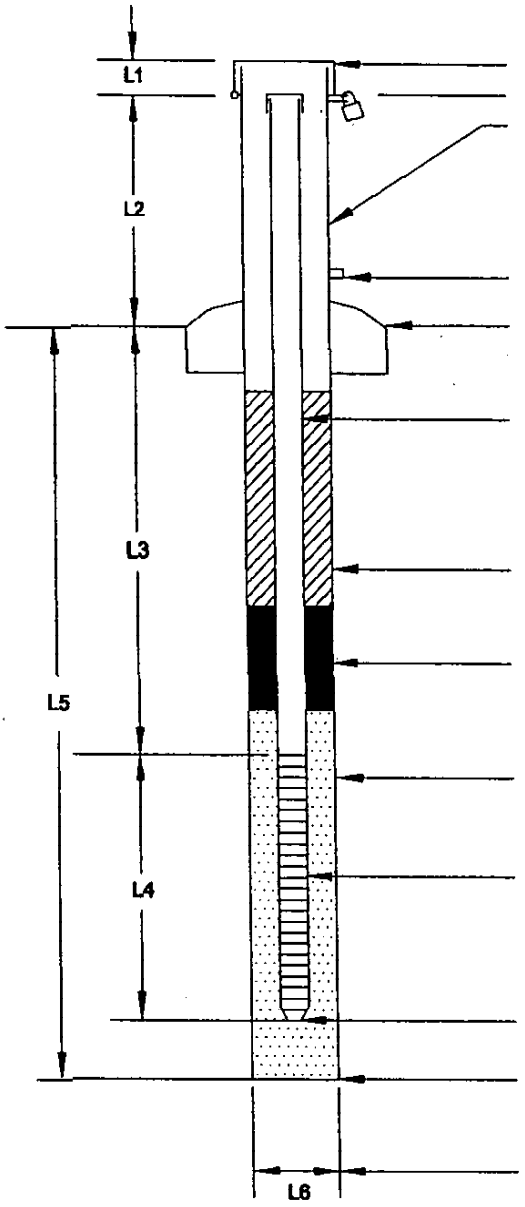
APPENDIX I

SOIL BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS



Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	148.65 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.5'
Pad Dimensions	4'x4'
Height Above Ground	3.3'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	69.15'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	79.15'
Depth To Bottom Of Filter Sand	79.15'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-1

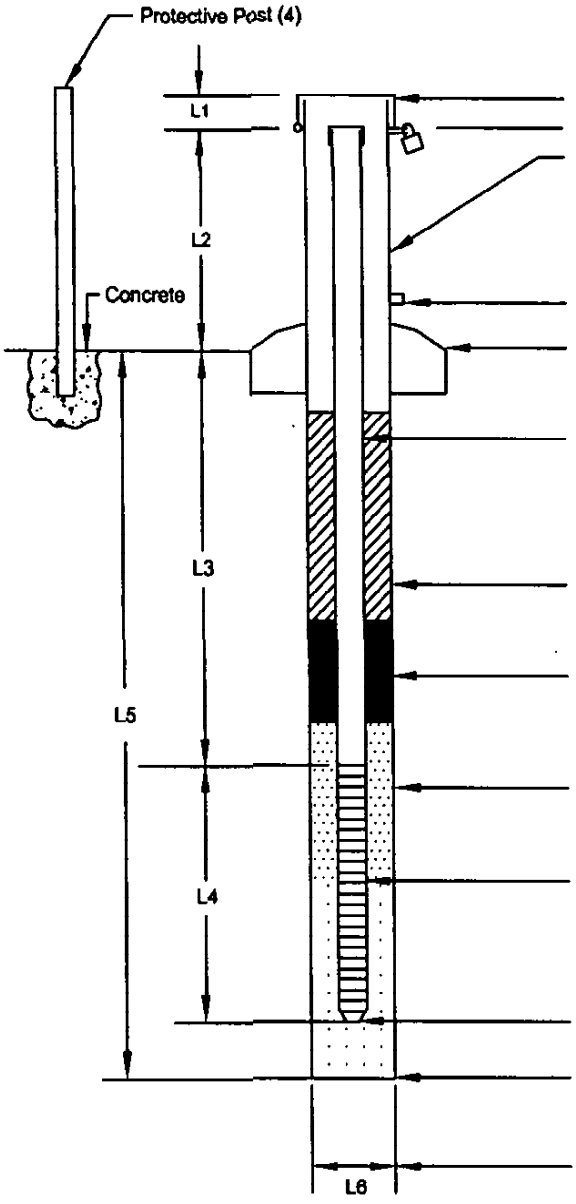
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 3.3 Ft
L3 = 69.15 Ft
L4 = 10 Ft
L5 = 79.15 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-do001

Monitoring Well Construction Diagram
Above Grade Well



Lockable Cap	
Casing Elevation	138.40 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	4"
Casing Length	3.5'
Pad Dimensions	4'x4'
Height Above Ground	2.7'
Drain with Threaded Plug	
Concrete Slab Elevation	133.92 ft NGVD
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	49.26'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	59.26'
Depth To Bottom Of Filter Sand	59.26'
Diameter Of Borehole	8"

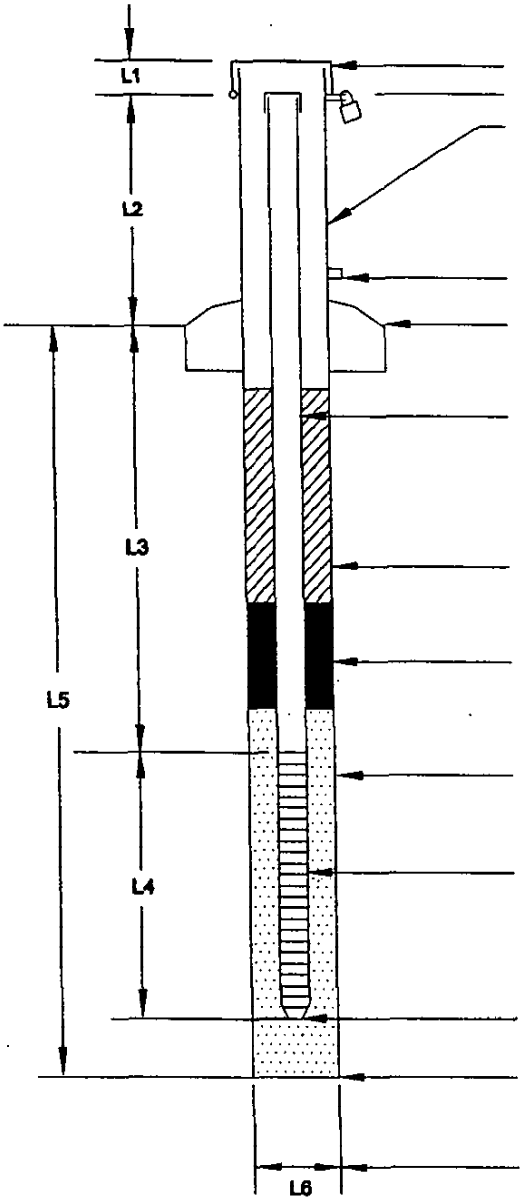
Cross-Sectional View

Note: Maintenance activity to well - May 18, 2006

Project: Rodemacher Power Station	L1 = 0.2 Ft	CLECO
Project No: 01-0017	L2 = 2.48 Ft	
Monitoring Well: W-1 (revised)	L3 = 49.26 Ft	
	L4 = 10 Ft	
Diagram Not To Scale	L5 = 59.26 Ft	
	L6 = 0.75 Ft	

File No: 01-0017-de001

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	151.80 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.6'
Pad Dimensions	4'x4'
Height Above Ground	3.4'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	86.2'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	96.2'
Depth To Bottom Of Filter Sand	96.2'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-2

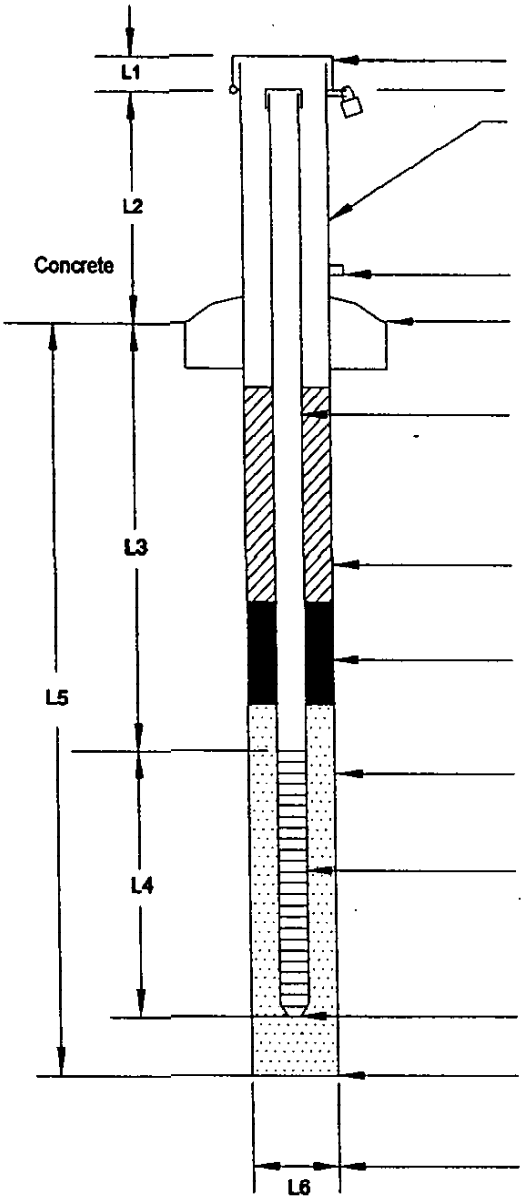
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 3.4 Ft
L3 = 86.2 Ft
L4 = 10 Ft
L5 = 96.2 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-dc002

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	93.4 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.5'
Pad Dimensions	4'x4'
Height Above Ground	3.3'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	67'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	77'
Depth To Bottom Of Filter Sand	77'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-3

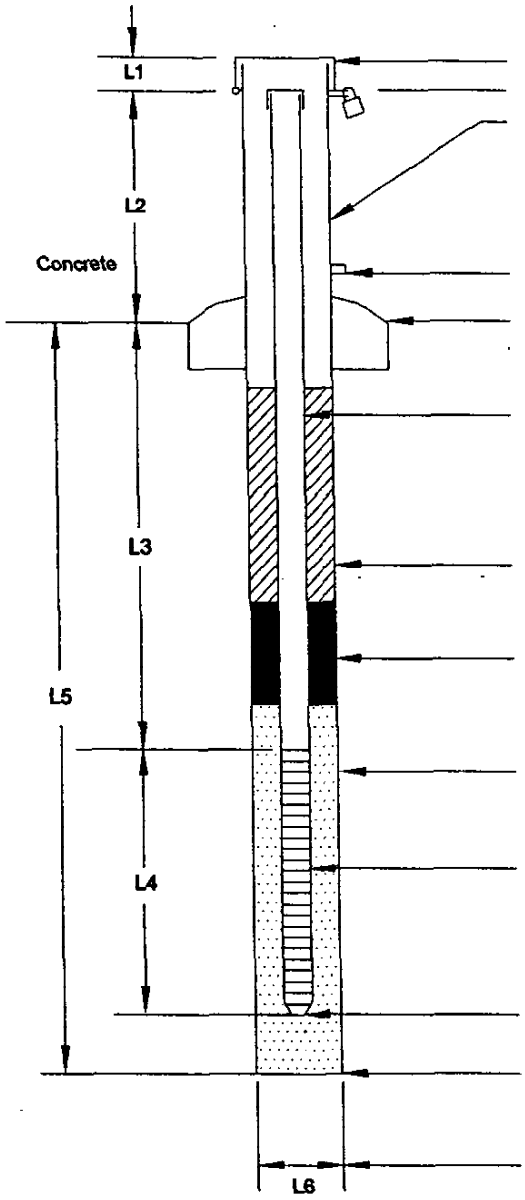
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 3.3 Ft
L3 = 67 Ft
L4 = 10 Ft
L5 = 77 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de003

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	94.8 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	4"
Casing Length	3.0'
Pad Dimensions	4'x4'
Height Above Ground	2.8'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	35.1'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	45.1'
Depth To Bottom Of Filter Sand	45.1'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-4

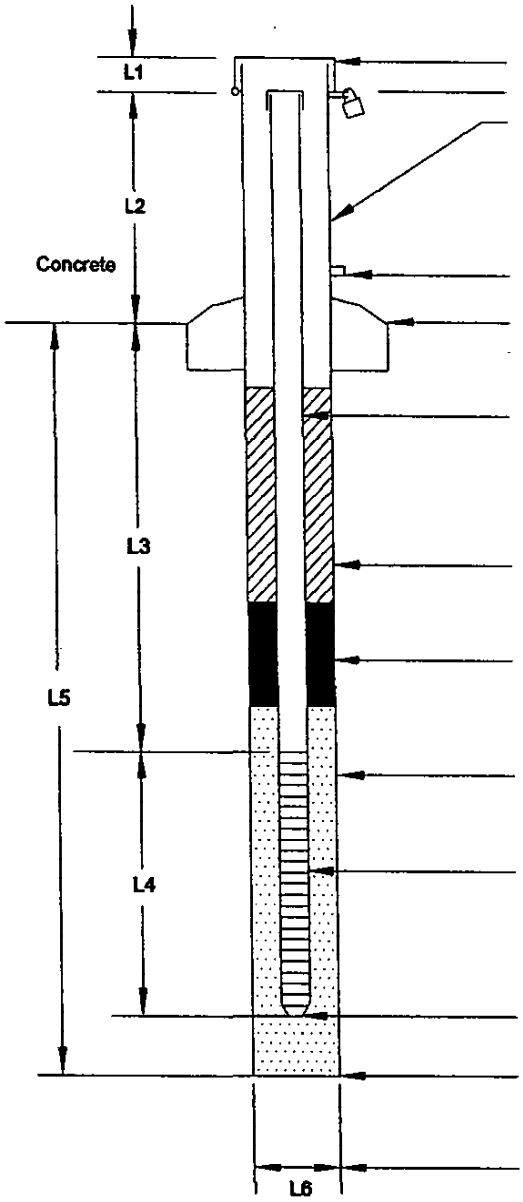
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 2.8 Ft
L3 = 35.1 Ft
L4 = 10 Ft
L5 = 45.1 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de004

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	95.20 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.5'
Pad Dimensions	4'x4'
Height Above Ground	3.3'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	32.6'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	42.6'
Depth To Bottom Of Filter Sand	42.6'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-5

Diagram Not To Scale

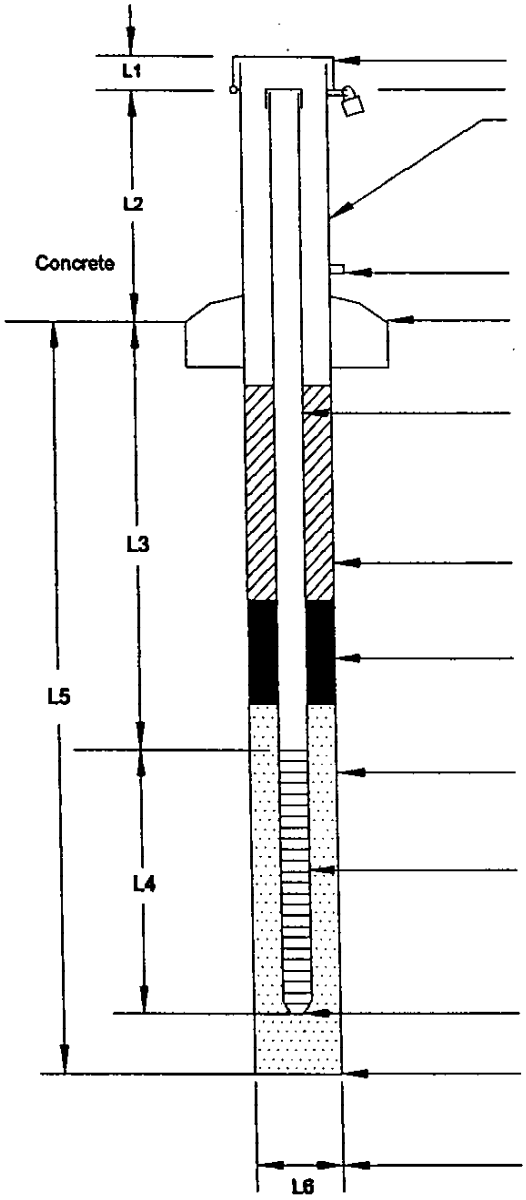
L1 = 0.2 Ft
L2 = 3.3 Ft
L3 = 35.1 Ft
L4 = 10 Ft
L5 = ~~45.1~~ 42.6 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-dc005

426

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	114.2 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.2'
Pad Dimensions	4'x4'
Height Above Ground	3.0'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	19.8'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	29.8'
Depth To Bottom Of Filter Sand	29.8'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-6

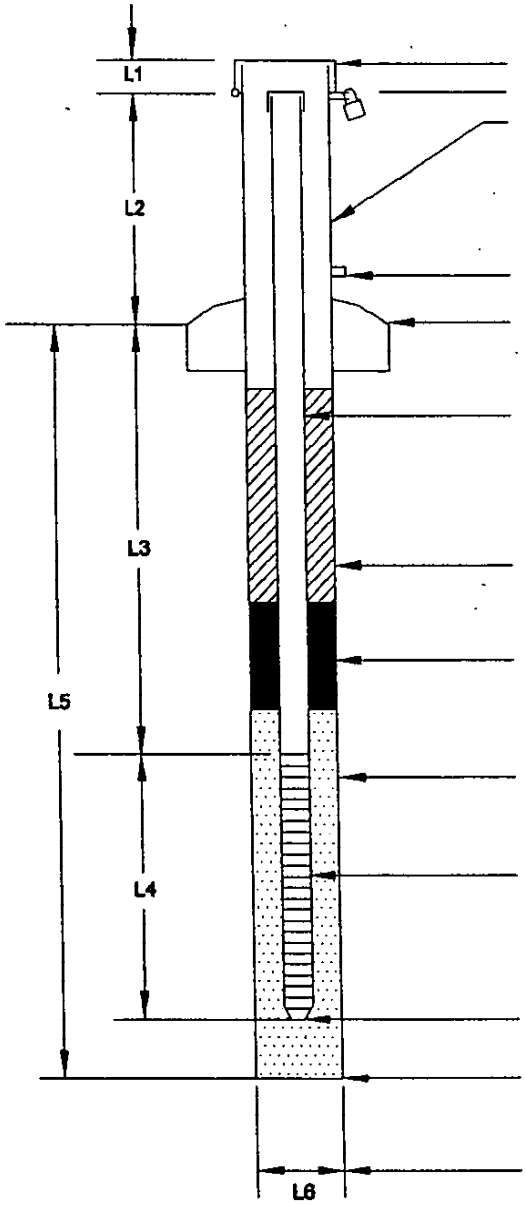
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 3.0 Ft
L3 = 19.8 Ft
L4 = 10 Ft
L5 = 29.8 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-do006

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	117.3 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	3.5'
Pad Dimensions	4'x4'
Height Above Ground	3.3'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	40.3'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	50.3'
Depth To Bottom Of Filter Sand	50.3'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-7

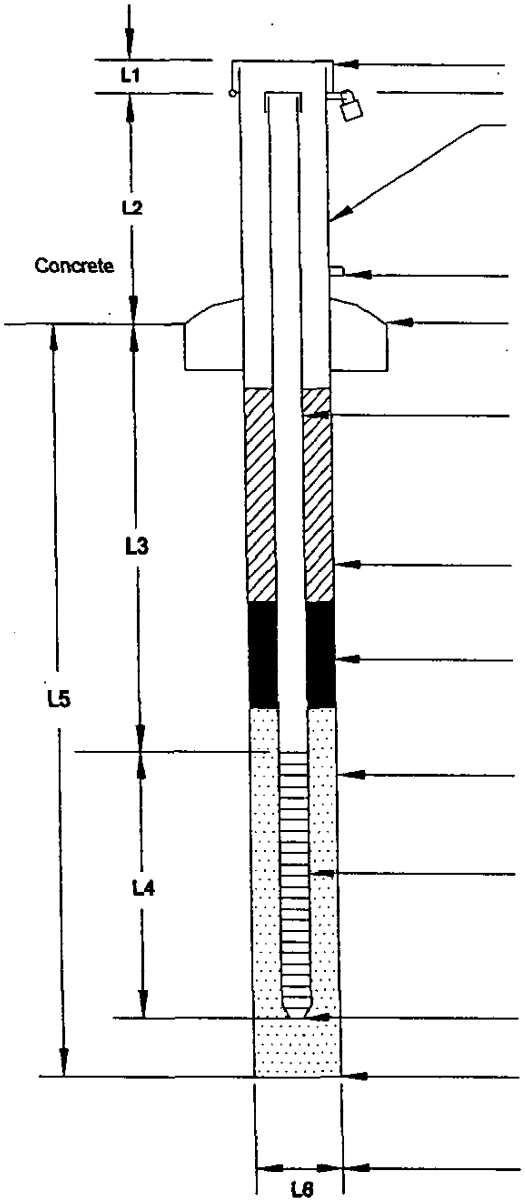
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 3.3 Ft
L3 = 40.3 Ft
L4 = 10 Ft
L5 = 50.3 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-dc007

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	117.6 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	4"
Casing Length	2.7'
Pad Dimensions	4'x4'
Height Above Ground	2.5'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	36.2'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	46.2'
Depth To Bottom Of Filter Sand	46.2'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-8

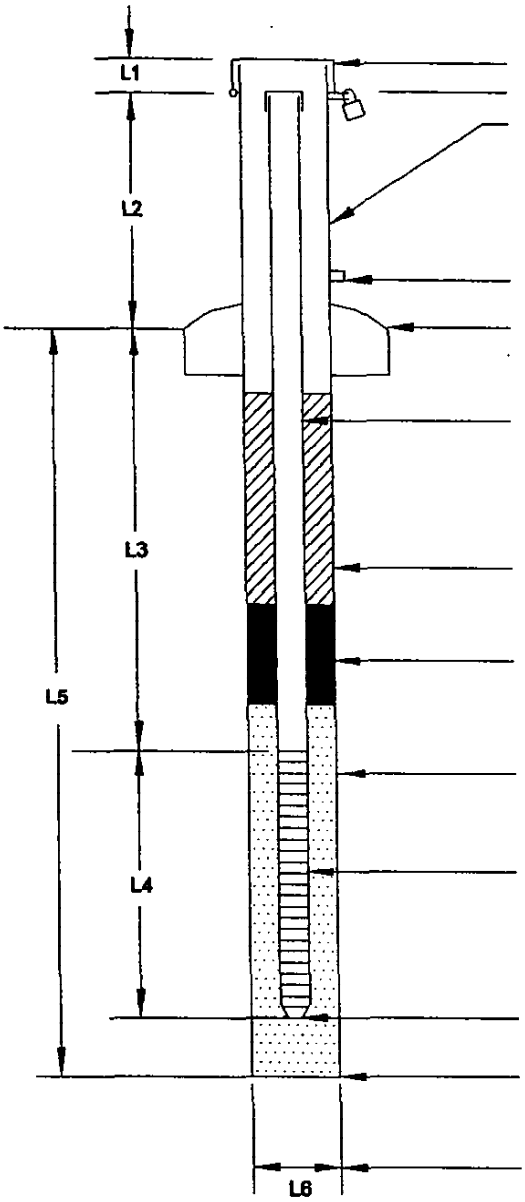
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 2.5 Ft
L3 = 36.2 Ft
L4 = 10 Ft
L5 = 46.2 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de008

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	107.2 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	4"
Casing Length	2.95'
Pad Dimensions	4'x4'
Height Above Ground	2.75'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	20.4'
Backfill Around Casing	
Material	neat cement
Seal	
Type Of Seal	bentonite
Filter Pack	
Type Of Filter	sand pack
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	30.4'
Depth To Bottom Of Filter Sand	30.4'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-9

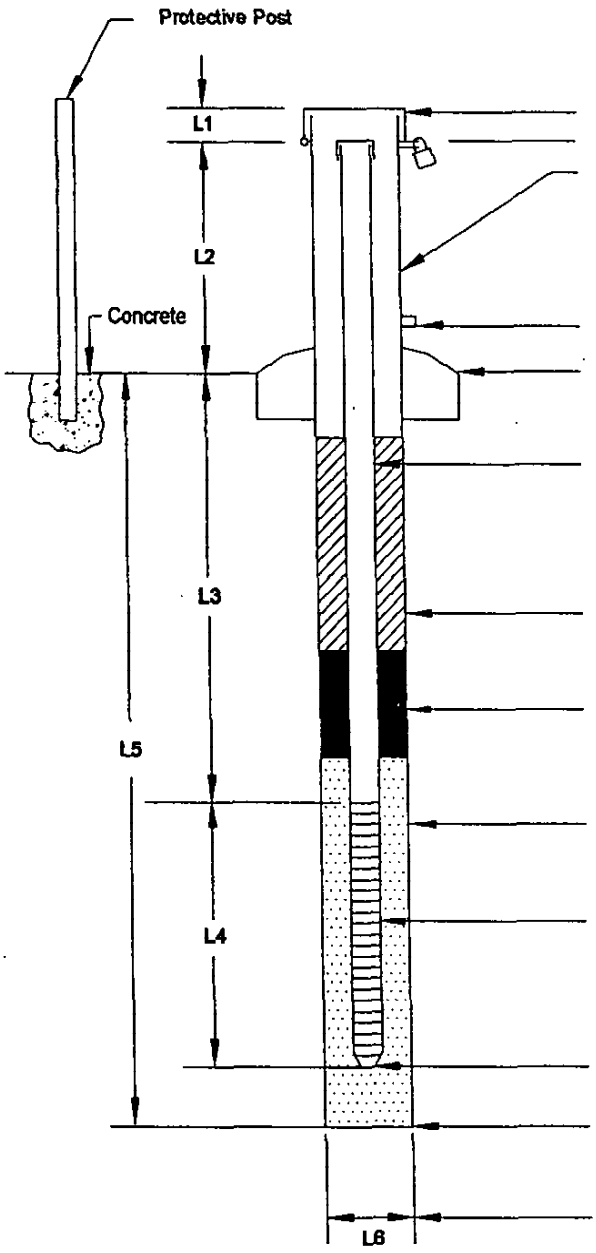
Diagram Not To Scale

L1 = 0.2 Ft
L2 = 2.75 Ft
L3 = 20.4 Ft
L4 = 10 Ft
L5 = 30.4 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de009

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	138.41 ft NGVD
Protective Casing and Concrete	neat cement
Casing Material	
Casing Diameter	6"
Casing Length	2.9'
Pad Dimensions	4'x4'
Height Above Ground	2.65'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	38.2'
Backfill Around Casing	
Material	neat cement
Thickness	25'
Seal	
Type Of Seal	bentonite
Thickness	3'
Filter Pack	
Type Of Filter	sand pack
Distance Above Screen	2'
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	48.20'
Depth To Bottom Of Filter Sand	50'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-10

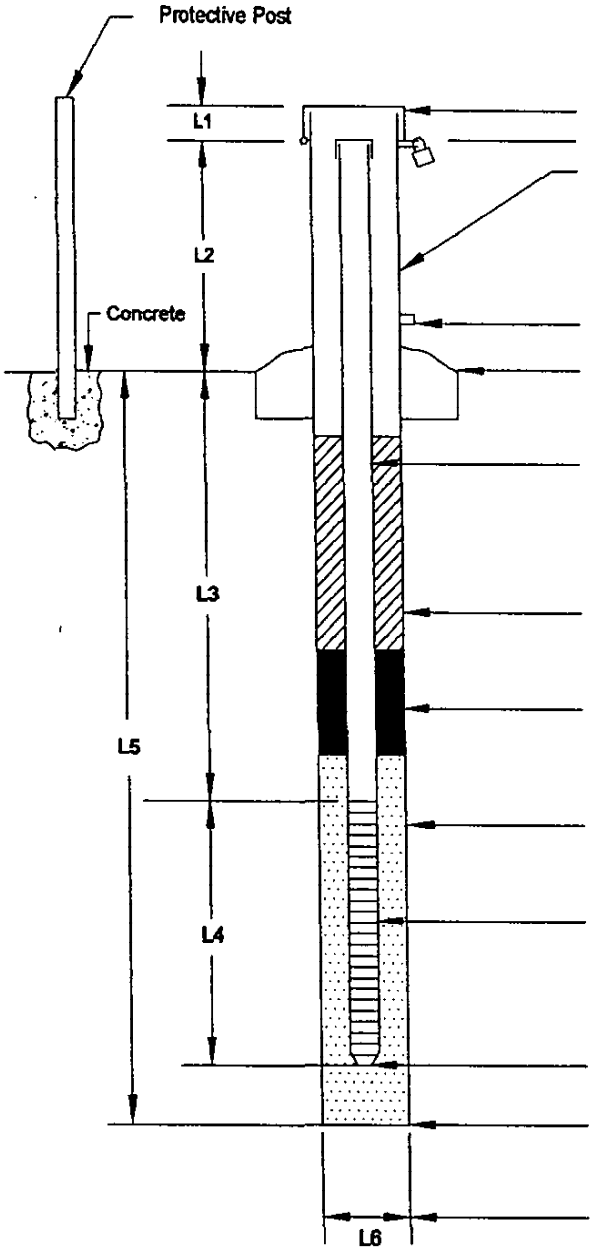
Diagram Not To Scale

L1 = 0.25 Ft
L2 = 2.65 Ft
L3 = 38.2 Ft
L4 = 10 Ft
L5 = 50 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-da010

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	138.15 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	8"
Casing Length	3.15'
Pad Dimensions	4'x4'
Height Above Ground	2.9'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	38.97'
Backfill Around Casing	
Material	neat cement
Thickness	33.9'
Seal	
Type Of Seal	bentonite
Thickness	3'
Filter Pack	
Type Of Filter	sand pack
Distance Above Screen	2'
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	48.97'
Depth To Bottom Of Filter Sand	50'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-11

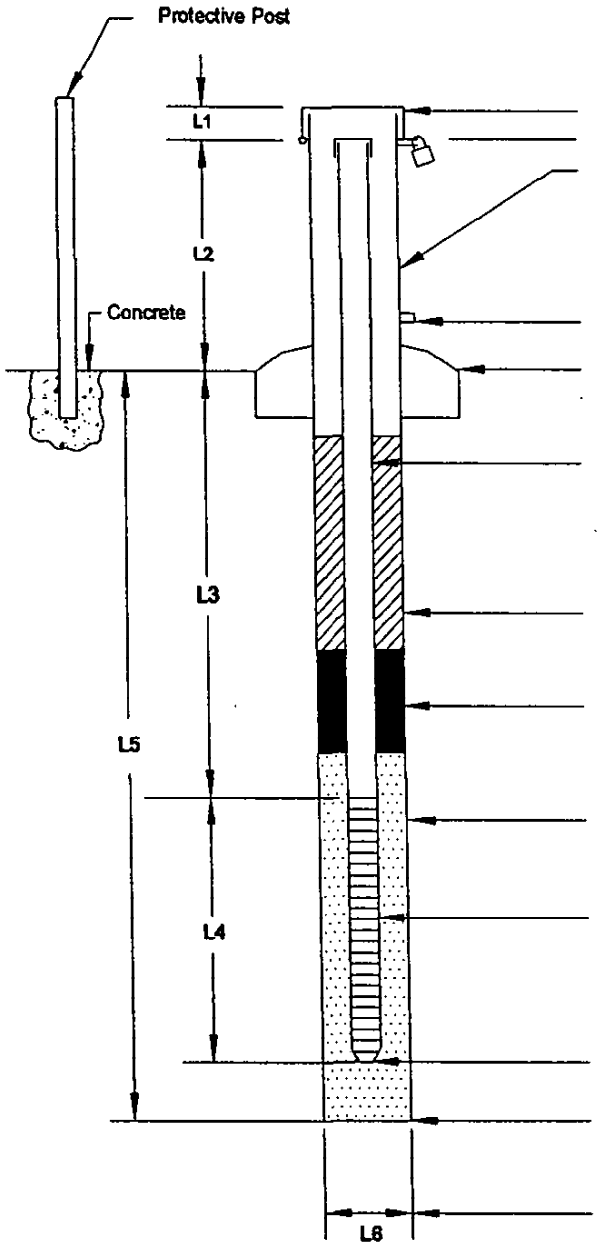
Diagram Not To Scale

L1 = 0.25 Ft
L2 = 2.9 Ft
L3 = 38.97 Ft
L4 = 10 Ft
L5 = 48.97 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de011

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	115.68 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	8"
Casing Length	2.25'
Pad Dimensions	4'x4'
Height Above Ground	2.0'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	37.55'
Backfill Around Casing	
Material	neat cement
Thickness	32.5'
Seal	
Type Of Seal	bentonite
Thickness	3'
Filter Pack	
Type Of Filter	sand pack
Distance Above Screen	2'
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	47.55'
Depth To Bottom Of Filter Sand	50'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-12

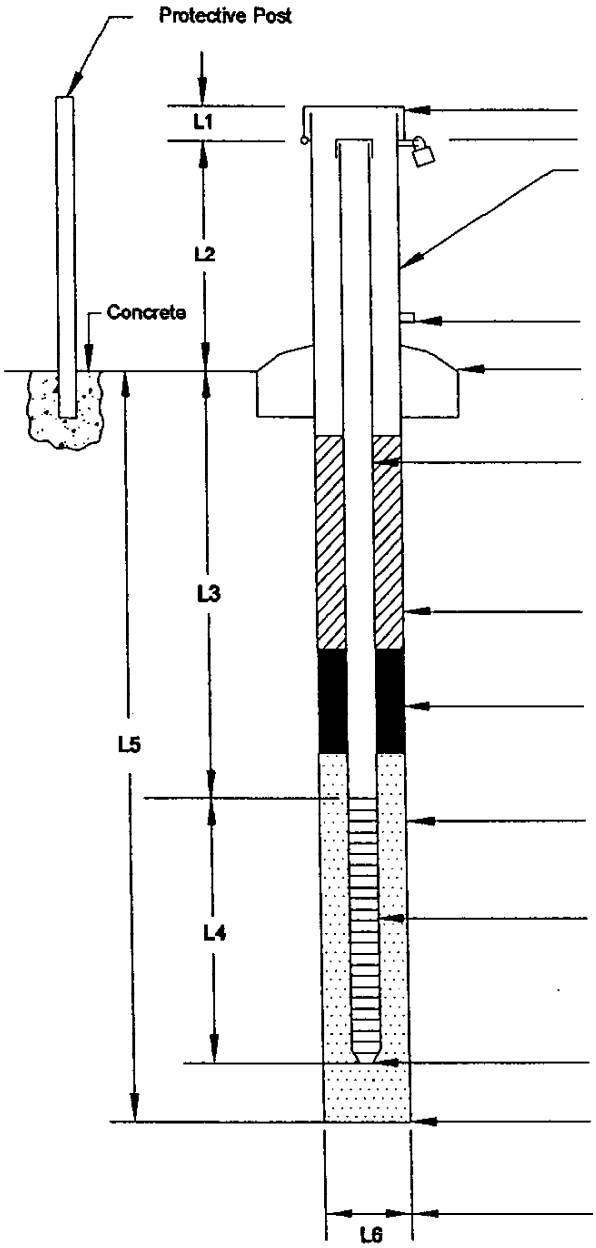
Diagram Not To Scale

L1 = 0.25 Ft
L2 = 2.0 Ft
L3 = 37.55 Ft
L4 = 10 Ft
L5 = 47.55 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-dc012

Monitoring Well Construction Diagram
Above Grade Well



Cross-Sectional View

Lockable Cap	
Casing Elevation	119.17 ft NGVD
Protective Casing and Concrete	
Casing Material	neat cement
Casing Diameter	8"
Casing Length	2.9'
Pad Dimensions	4'x4'
Height Above Ground	2.65'
Drain with Threaded Plug	
Concrete Slab	
Well Casing	
Material	PVC
Diameter	2"
Joint Type	flush thread
Length	33.05'
Backfill Around Casing	
Material	neat cement
Thickness	28.0'
Seal	
Type Of Seal	bentonite
Thickness	3'
Filter Pack	
Type Of Filter	sand pack
Distance Above Screen	2'
Well Screen	
Screen Material	PVC
Diameter	2"
Length	10'
Slot Size	.010"
Depth To Bottom Of Monitoring Well	43.05'
Depth To Bottom Of Filter Sand	50'
Diameter Of Borehole	8"

Project: Rodemacher Power Station

Project No: 01-0009

Monitoring Well: W-13

Diagram Not To Scale

L1 = 0.25 Ft
L2 = 2.65 Ft
L3 = 33.05 Ft
L4 = 10 Ft
L5 = 43.05 Ft
L6 = 0.75 Ft

CLECO

File No: 01-0009-de013

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG

BORING/WELL NO.: W-10
TOTAL DEPTH: 50 Feet
TOP OF CASING ELEV.: 138.41 Ft NGVD
GROUND SURFACE ELEV.: 135.8 Ft NGVD

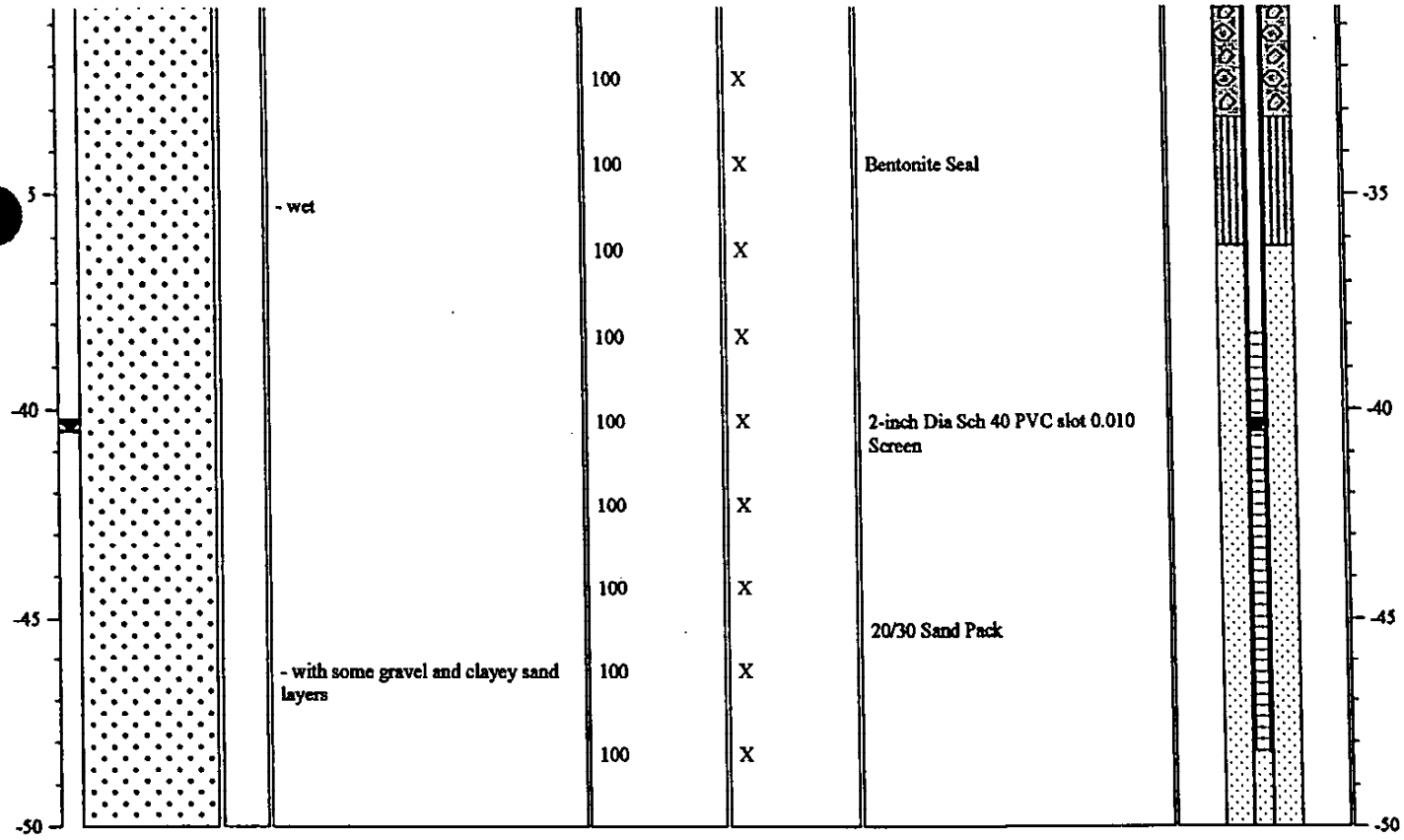
CLIENT: Cleco Power, LLC
PROJECT: Rodemacher Power Station
SITE LOCATION: Boyce, Louisiana
PROJECT NO.: 01-0009
LOGGED BY: J. Mayeux

DRILLING CO.: EDI Environmental
DRILLER: D. Sandoz
METHOD OF DRILLING: DPT / HSA
SAMPLING METHODS: DPT / Split Spoon
DATES DRILLED: 04/12/2005

NOTES:

Water level during drilling: 40.48 feet bgs
Water level in completed well: 40.53 feet bgs

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	CORE RECOVERY (Percent)	SAMPLE TAKEN	WELL DESCRIPTION	WELL CONSTRUCTION
0 to -10		CL	Clayey Silt: tan to grey, stiff, dry	100	X	8-inch Borehole	
-10 to -15		SC	Sandy Silt: tan, soft, dry	100	X		
-15 to -25		CL	Silty Clay: red, grey, tan, stiff, dry	100	X	Grouted Annulus	
-20 to -25				100	X	2-inch Dia Sch 40 PVC Casing	
-25 to -30		SC	Sand: tan, loose	100	X		


5
-40
-45
-50
- wet
- with some gravel and clayey sand layers
100
100
100
100
100
100
100
X
X
X
X
X
X
X
Bentonite Seal
2-inch Dia Sch 40 PVC slot 0.010 Screen
20/30 Sand Pack
-35
-40
-45
-50

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

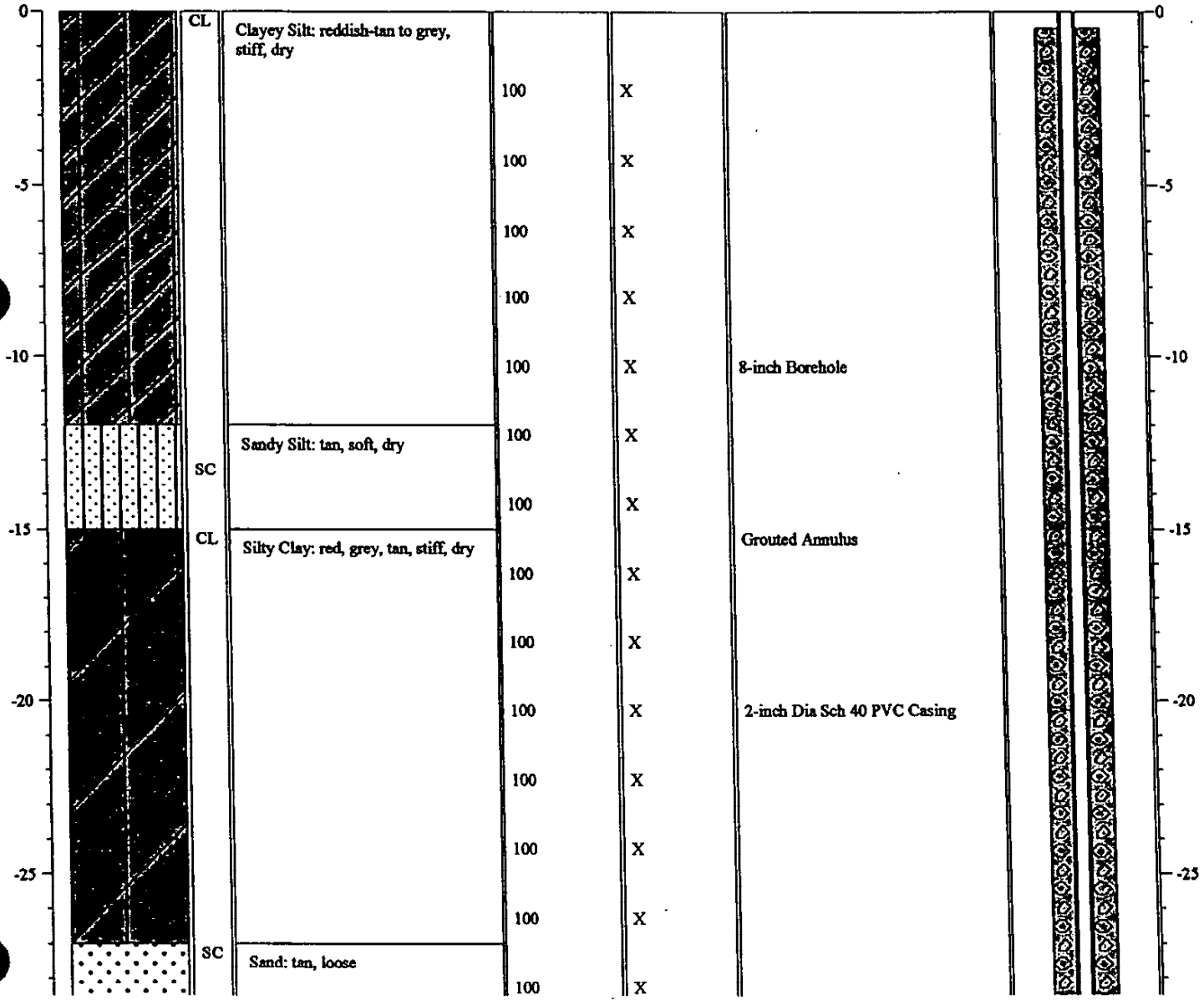
SOIL BORING LOG

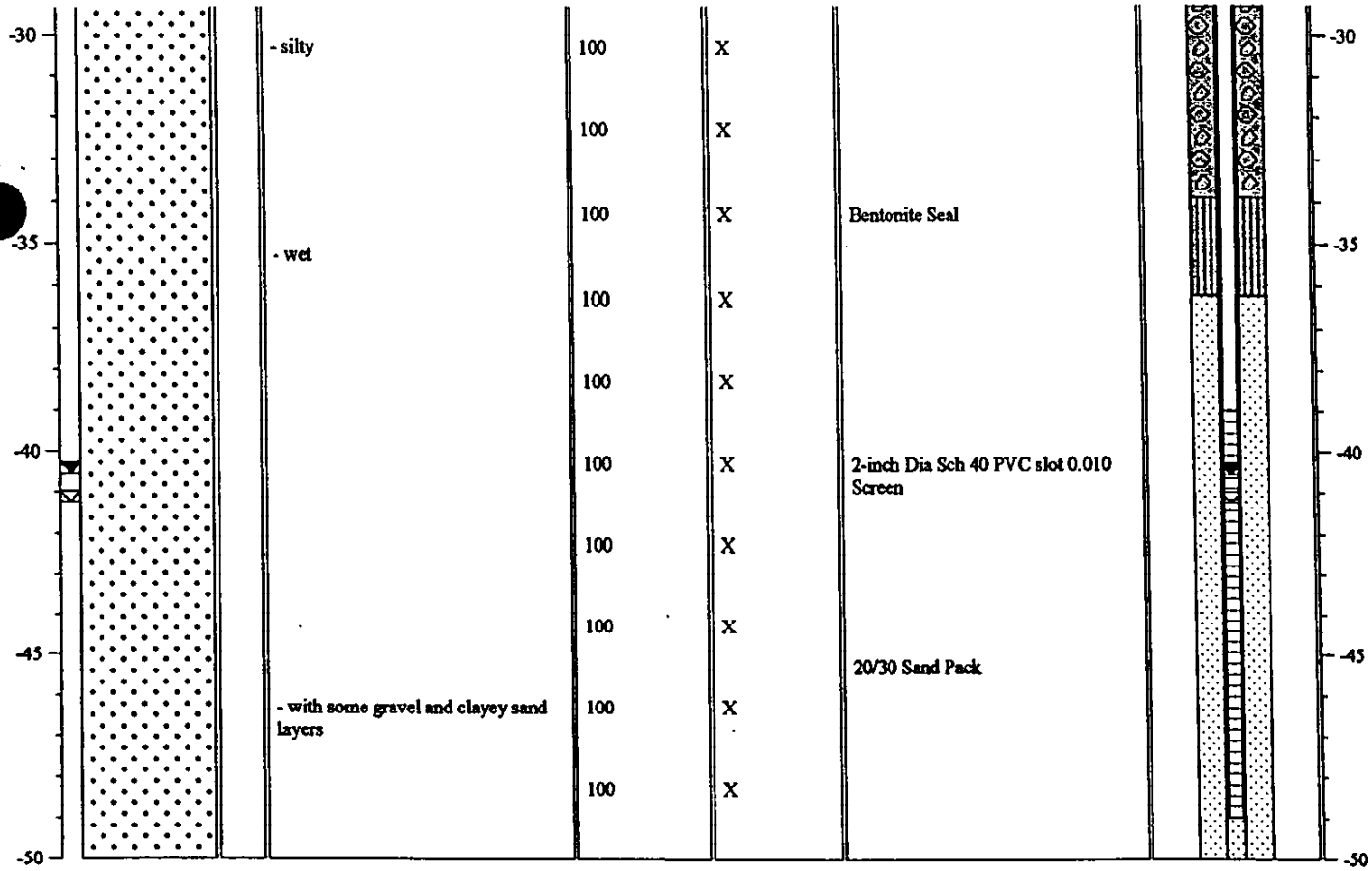
BORING/WELL NO.:	W-11
TOTAL DEPTH:	50 Feet
TOP OF CASING ELEV.:	138.15 Ft NGVD
GROUND SURFACE ELEV.:	134.2 Ft NGVD

CLIENT:	Cleco Power, LLC	DRILLING CO.:	EDI Environmental
PROJECT:	Rodemacher Power Station	DRILLER:	D. Sandoz
SITE LOCATION:	Boyce, Louisiana	METHOD OF DRILLING:	DPT / HSA
PROJECT NO.:	01-0009	SAMPLING METHODS:	DPT / Split Spoon
LOGGED BY:	J. Mayeux	DATES DRILLED:	04/13/2005

NOTES:

▽ Water level during drilling: 41.23 feet bgs
▼ Water level in completed well: 40.53 feet bgs




-30
-35
-40
-45
-50
- silty
- wet
- with some gravel and clayey sand layers
100
100
100
100
100
100
100
100
X
X
X
X
X
X
X
X
Bentonite Seal
2-inch Dia Sch 40 PVC slot 0.010 Screen
20/30 Sand Pack
-30
-35
-40
-45
-50

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG

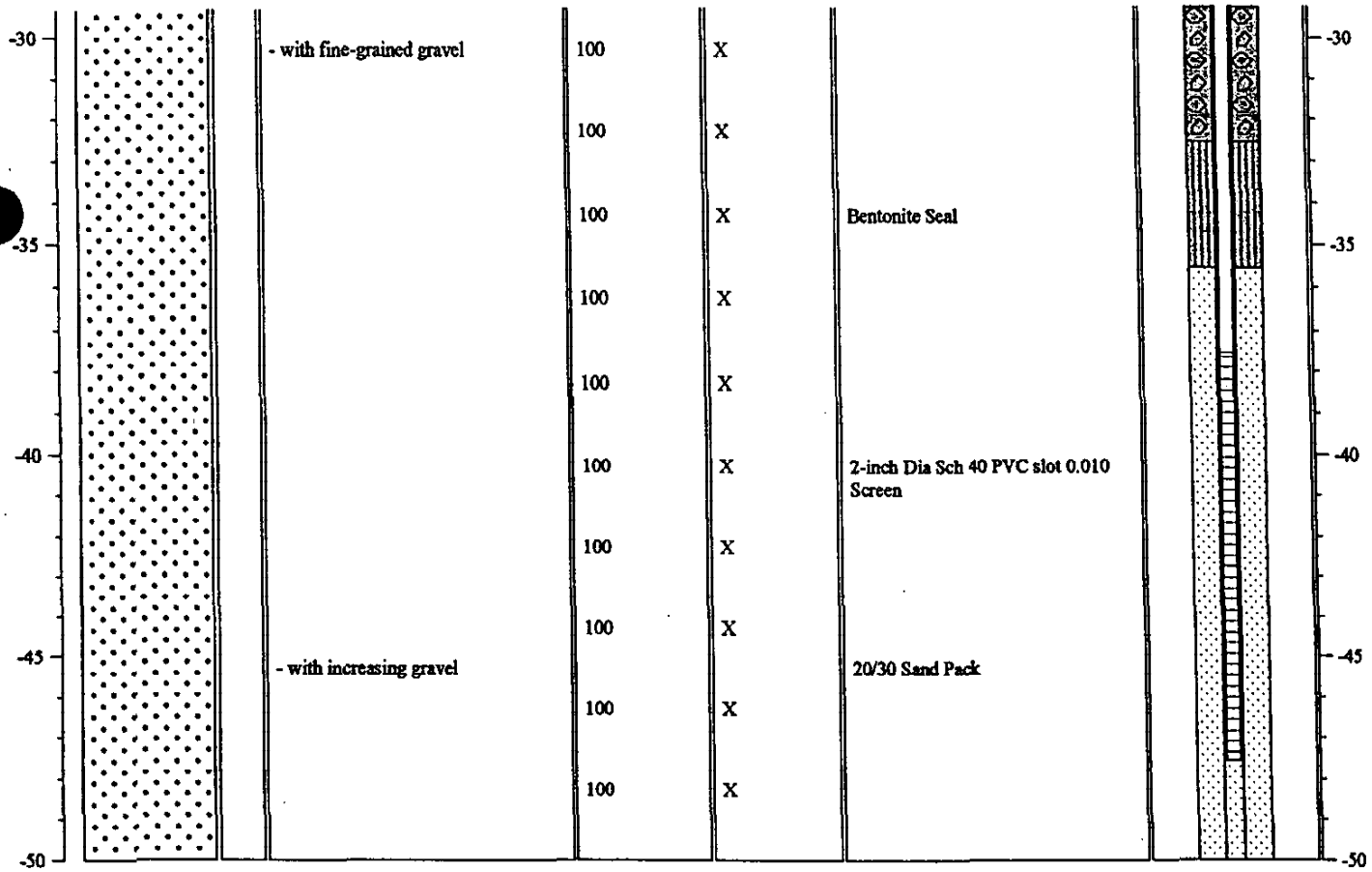
BORING/WELL NO.:	W-12
TOTAL DEPTH:	50 Feet
TOP OF CASING ELEV.:	115.66 Ft NGVD
GROUND SURFACE ELEV.:	112.7 Ft NGVD

CLIENT:	Cleco Power, LLC	DRILLING CO.:	EDI Environmental
PROJECT:	Rodemacher Power Station	DRILLER:	D. Sandoz
SITE LOCATION:	Boyce, Louisiana	METHOD OF DRILLING:	DPT / HSA
PROJECT NO.:	01-0009	SAMPLING METHODS:	DPT / Split Spoon
LOGGED BY:	J. Mayeux	DATES DRILLED:	04/15/2005

NOTES:

⧖ Water level during drilling: 12.48 feet bgs
⧗ Water level in completed well: 12.81 feet bgs

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	CORE RECOVERY (Percent)	SAMPLE TAKEN	WELL DESCRIPTION	WELL CONSTRUCTION
0		CL	Silty Clay: reddish-tan to grey, stiff, dry	100	X		
-5				100	X		
				100	X		
				100	X		
-10				100	X	8-inch Borehole	
			- soft, wet	100	X		
-15				100	X	Grouted Annulus	
				100	X		
-20		CL	Clayey Silt: reddish-tan, stiff	100	X	2-inch Dia Sch 40 PVC Casing	
				100	X		
-25		SC	Sand: tan, medium-grained, loose	100	X		
				100	X		


-30
-35
-40
-45
-50
- with fine-grained gravel
- with increasing gravel
100
X
Bentonite Seal
2-inch Dia Sch 40 PVC slot 0.010 Screen
20/30 Sand Pack

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG

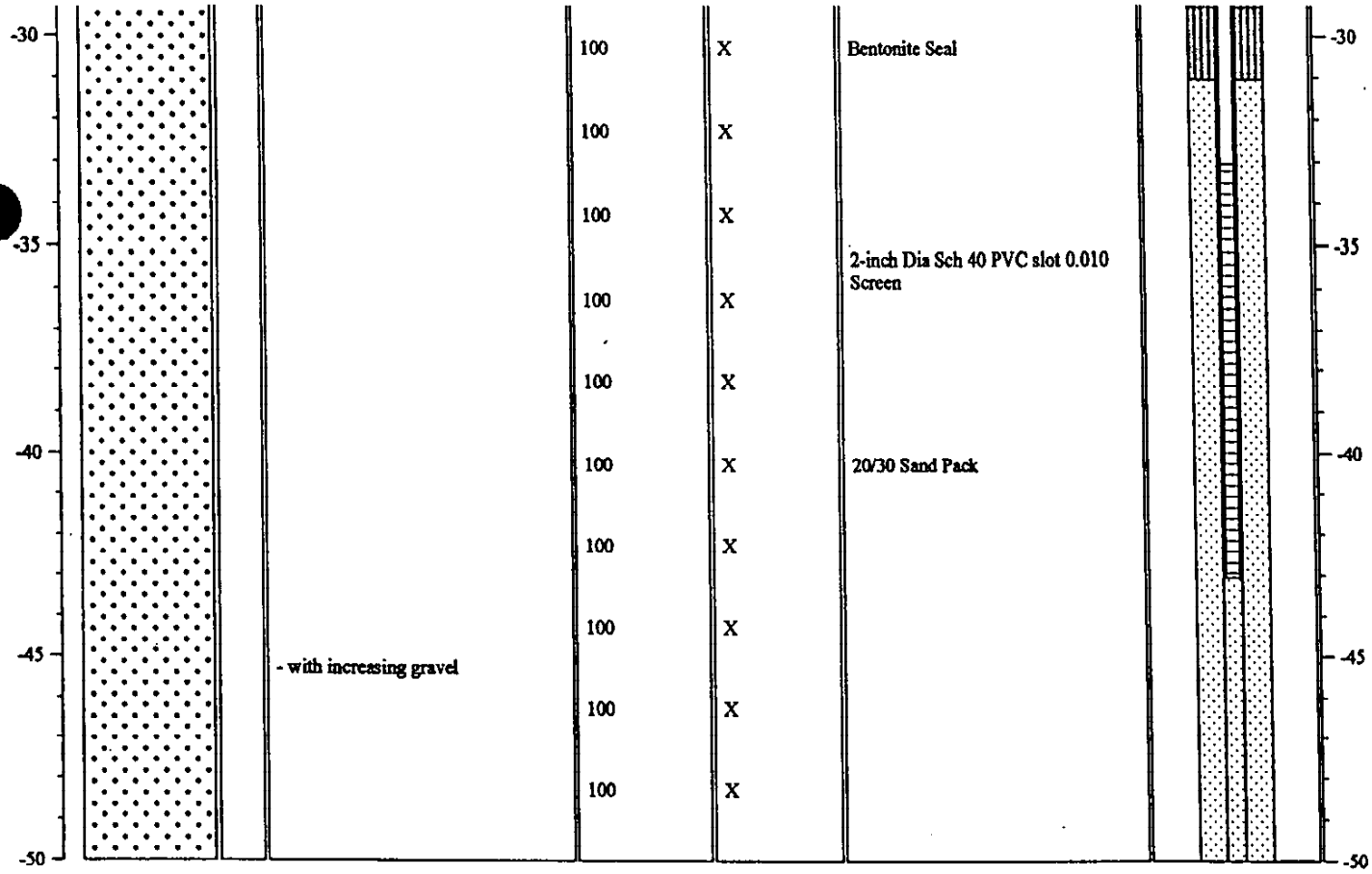
BORING/WELL NO.: W-13
TOTAL DEPTH: 50 Feet
TOP OF CASING ELEV.: 119.17 Ft NGVD
GROUND SURFACE ELEV.: 116.6 Ft NGVD

CLIENT:	Cleco Power, LLC	DRILLING CO.:	EDI Environmental
PROJECT:	Rodemacher Power Station	DRILLER:	D. Sandoz
SITE LOCATION:	Boyce, Louisiana	METHOD OF DRILLING:	DPT / HSA
PROJECT NO.:	01-0009	SAMPLING METHODS:	DPT / Split Spoon
LOGGED BY:	J. Mayeux	DATES DRILLED:	04/18/2005

NOTES:

Water level during drilling: 16.56 feet bgs
Water level in completed well: 16.83 feet bgs

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	CORE RECOVERY (Percent)	SAMPLE TAKEN	WELL DESCRIPTION	WELL CONSTRUCTION
0		CL	Silty Clay: reddish-tan to grey, stiff, dry	100	X		
-5				100	X		
				100	X		
				100	X		
-10				100	X	8-inch Borehole	
				100	X		
			Clayey Silt: grey, still, moist	100	X		
-15						Grouted Annulus	
				100	X		
			Sand: tan, medium-grained, loose, wet	100	X		
-20		CL		100	X	2-inch Dia Sch 40 PVC Casing	
				100	X		
				100	X		
-25		SC	- wet	100	X		
				100	X		


-30
-35
-40
-45
-50
- with increasing gravel
100
X
Bentonite Seal
2-inch Dia Sch 40 PVC slot 0.010 Screen
20/30 Sand Pack

E·A·G·L·E
ENVIRONMENTAL SERVICES, INC.

SOIL BORING LOG

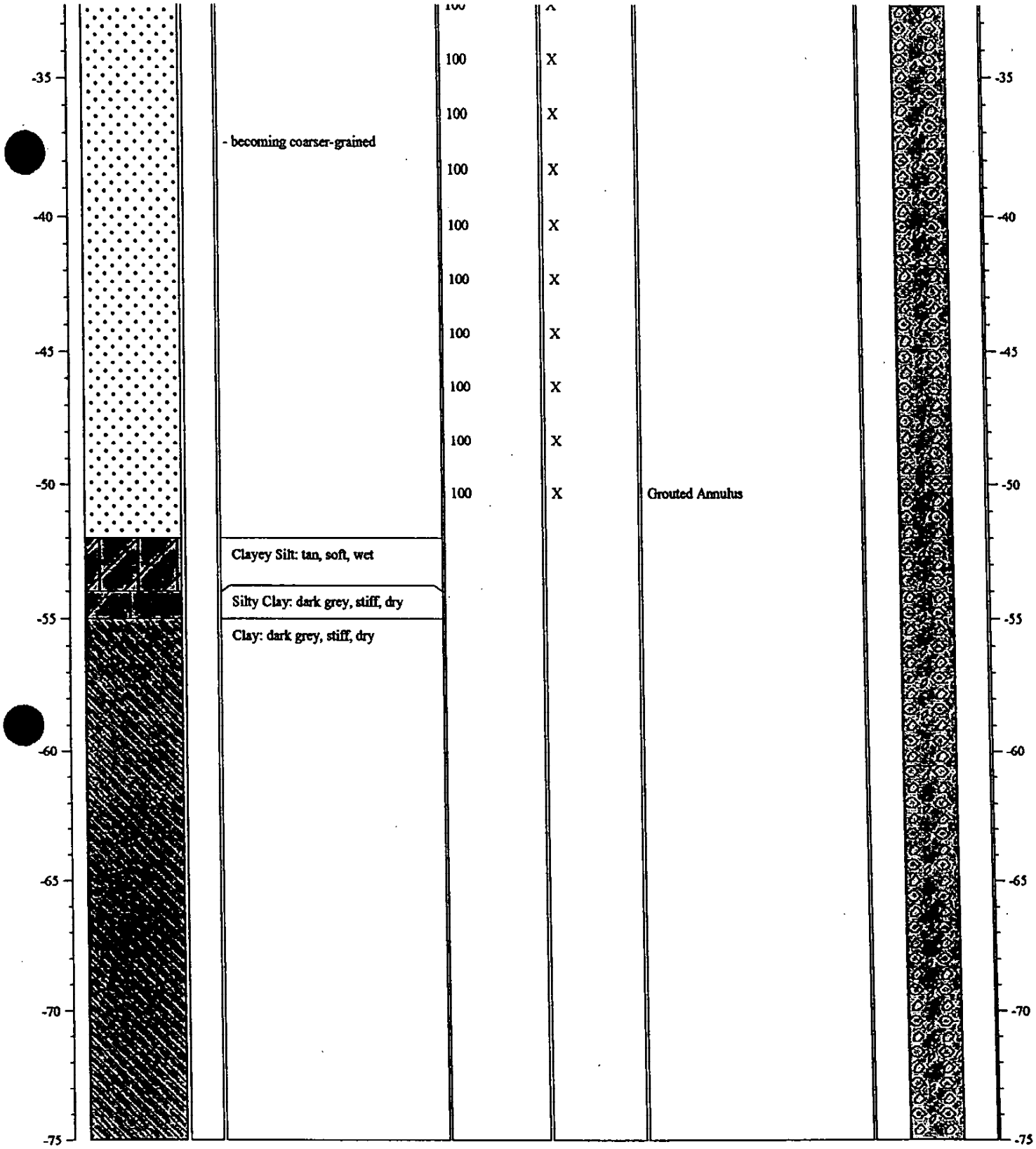
BORING/WELL NO.: EE-1
TOTAL DEPTH: 75 Feet
TOP OF CASING ELEV.: NA Ft NGVD
GROUND SURFACE ELEV.: 90 Ft NGVD

CLIENT:	Cleco Power, LLC	DRILLING CO.:	EDI Environmental
PROJECT:	Rodemacher Power Station	DRILLER:	D. Sandoz
SITE LOCATION:	Boyce, Louisiana	METHOD OF DRILLING:	DPT / HSA
PROJECT NO.:	01-0009	SAMPLING METHODS:	DPT / Split Spoon
LOGGED BY:	J. Mayeux	DATES DRILLED:	04/13/2005

NOTES:

▽ Water level during drilling: 8.0 feet bgs

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	CORE RECOVERY (Percent)	SAMPLE TAKEN	WELL DESCRIPTION	WELL CONSTRUCTION
0 to -10		CL	Silty Sand: tan, very fine-grained, loose; - wet	100	X	3-inch Diameter Borehole	
-10 to -15			Sand: tan, fine- to medium-grained, loose	100	X		
-15 to -20		CL	Clay: grey, stiff, with some gravel	100	X	Grouted Annulus	
-20 to -30		SC	Sand: tan, medium-grained, loose, with some gravel, wet	100	X		


-35
-40
-45
-50
-55
-60
-65
-70
-75
- becoming coarser-grained
Clayey Silt: tan, soft, wet
Silty Clay: dark grey, stiff, dry
Clay: dark grey, stiff, dry
100
X
Grouted Annulus

APPENDIX J

GROUNDWATER FLOW EVALUATION

Summary Table of Water Level Elevations
Cleco Power LLC Rodemacher Power Station

Well	Top of Casing Elevation	1/19/1999		7/15/1999		1/18/2000		7/18/2000	
		Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation
	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)
W-1	148.65	46.00	102.65	46.16	102.49	47.77	100.88	47.57	101.08
W-2	151.80	52.37	99.43	52.36	99.44	53.22	98.58	53.47	98.33
W-3	93.40	21.27	72.13	22.76	70.64	25.74	67.66	24.38	69.02
W-4	94.80	20.21	74.59	21.87	72.93	26.23	68.57	23.81	70.99
W-5	95.20	0.85	94.35	0.40	94.80	2.15	93.05	2.38	92.82
W-6	114.20	--	--	--	--	--	--	--	--
W-7	117.30	14.42	102.88	15.43	101.87	17.36	99.94	16.55	100.75
W-8	117.60	15.38	102.22	16.30	101.30	18.13	99.47	17.38	100.22
W-9	107.20	5.48	101.72	6.41	100.79	8.22	98.98	7.70	99.50
W-10	138.41	--	--	--	--	--	--	--	--
W-11	138.15	--	--	--	--	--	--	--	--
W-12	115.66	--	--	--	--	--	--	--	--
W-13	119.17	--	--	--	--	--	--	--	--

Notes: FT = Feet

FT NGVD = Feet relative to National Geodetic Vertical Datum

Summary Table of Water Level Elevations
Cleco Power LLC Rodemacher Power Station

Well	Top of Casing Elevation	7/19/2001		1/14/2002		7/10/2002		7/15/2003	
		Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation
	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)
W-1	148.65	46.70	101.95	46.12	102.53	46.27	102.38	45.88	102.77
W-2	151.80	52.75	99.05	52.22	99.58	52.20	99.60	51.93	99.87
W-3	93.40	22.54	70.86	19.50	73.90	23.27	70.13	24.30	69.10
W-4	94.80	20.00	74.80	17.12	77.68	21.47	73.33	22.70	72.10
W-5	95.20	1.64	93.56	0.85	94.35	1.65	93.55	1.18	94.02
W-6	114.20	--	--	--	--	--	--	--	--
W-7	117.30	15.18	102.12	14.65	102.65	15.80	101.50	15.03	102.27
W-8	117.60	16.16	101.44	15.60	102.00	16.75	100.85	15.90	101.70
W-9	107.20	6.31	100.89	5.73	101.47	6.84	100.36	6.50	100.70
W-10	138.41	--	--	--	--	--	--	--	--
W-11	138.15	--	--	--	--	--	--	--	--
W-12	115.66	--	--	--	--	--	--	--	--
W-13	119.17	--	--	--	--	--	--	--	--

Notes: FT = Feet

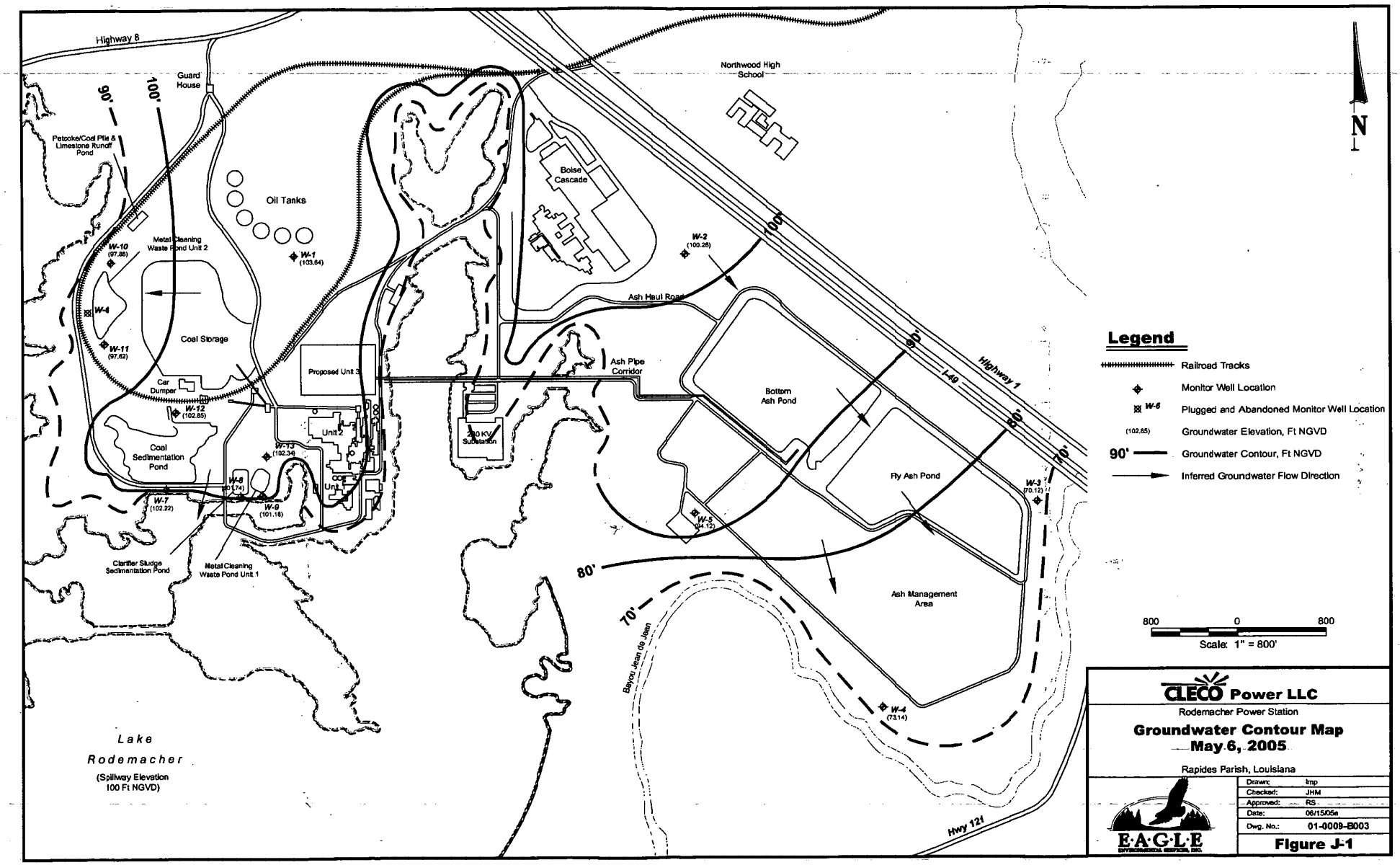
FT NGVD = Feet relative to National Geodetic Vertical Datum

Summary Table of Water Level Elevations
Cleco Power LLC Rodemacher Power Station

Well	Top of Casing Elevation	7/13/2004		1/18/2005		5/6/2005		5/26/2005	
		Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation	Depth -to- Water	Water Elevation
	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)	(FT)	(FT NGVD)
W-1	148.65	44.76	103.89	45.14	103.51	45.01	103.64	45.25	103.40
W-2	151.80	51.38	100.42	51.78	100.02	51.54	100.26	51.64	100.16
W-3	93.40	21.35	72.05	18.40	75.00	23.28	70.12	25.61	67.79
W-4	94.80	19.50	75.30	20.33	74.47	21.66	73.14	24.65	70.15
W-5	95.20	0.50	94.70	1.00	94.20	1.08	94.12	1.35	93.85
W-6	114.20	–	–	–	–	–	–	–	–
W-7	117.30	14.40	102.90	15.12	102.18	15.08	102.22	21.71	95.59
W-8	117.60	15.30	102.30	15.87	101.73	15.86	101.74	20.69	96.91
W-9	107.20	8.42	98.78	6.00	101.20	6.02	101.18	18.93	88.27
W-10	138.41	–	–	–	–	40.53	97.88	40.75	97.66
W-11	138.15	–	–	–	–	40.53	97.62	42.65	95.50
W-12	115.66	–	–	–	–	12.81	102.85	13.01	102.65
W-13	119.17	–	–	–	–	16.83	102.34	17.54	101.63

Notes: FT = Feet

FT NGVD = Feet relative to National Geodetic Vertical Datum



CLECO Power LLC

Rodemacher Power Station

Groundwater Contour Map

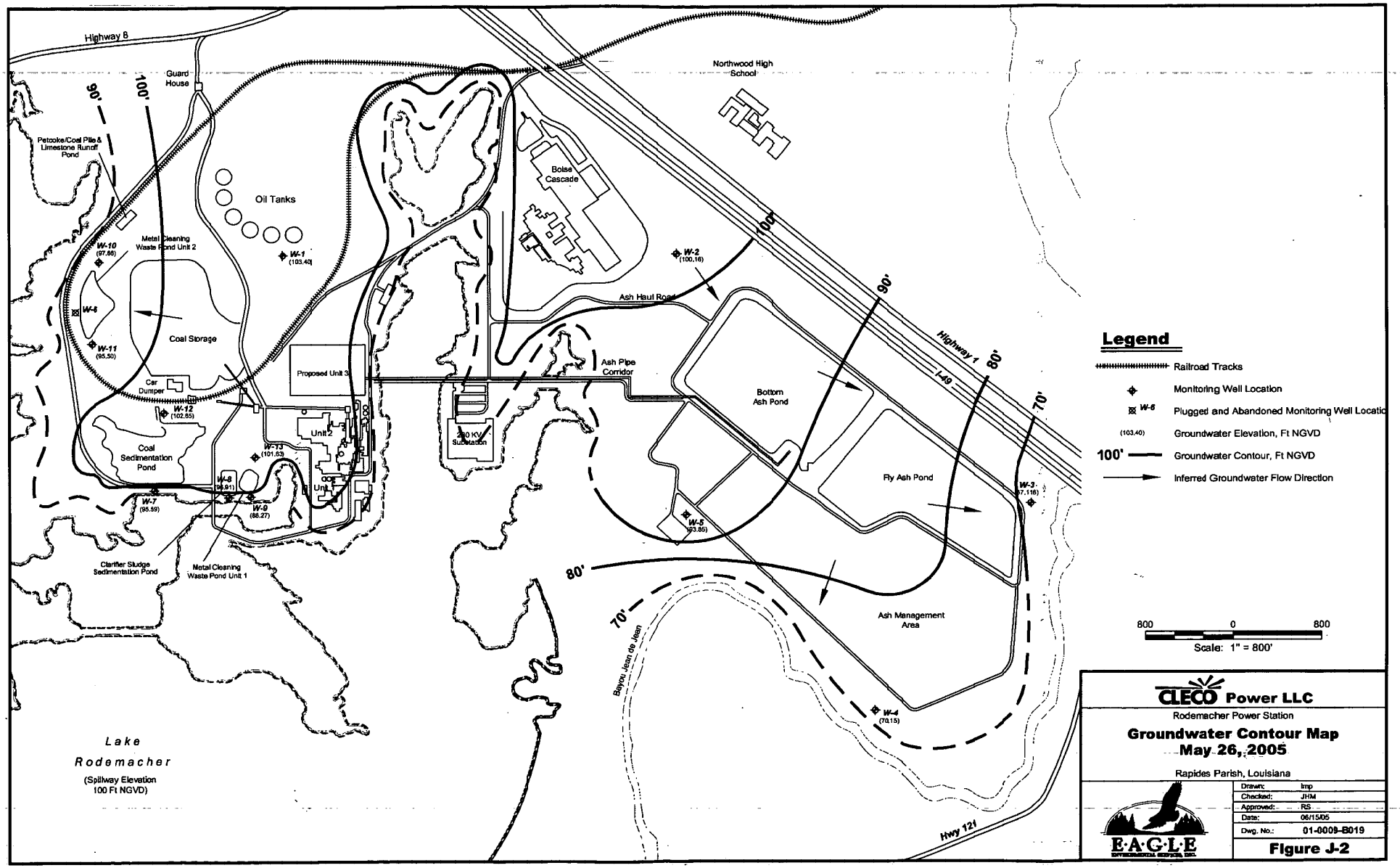
May 6, 2005

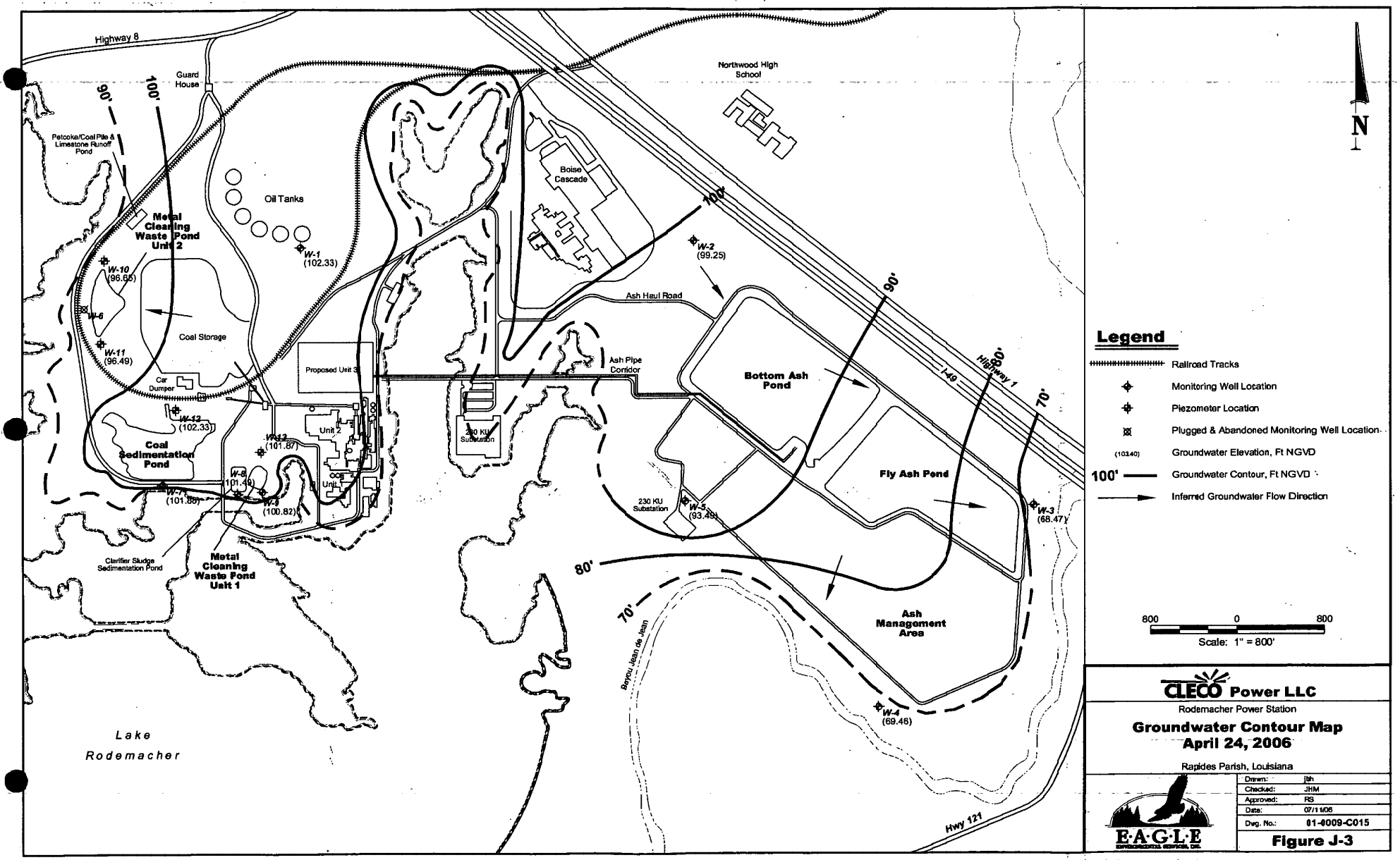
Rapides Parish, Louisiana

E·A·G·L·E ENVIRONMENTAL ENGINEERING, INC.

Drawn:	lmp
Checked:	JHM
Approved:	RS
Date:	06/15/05a
Dwg. No.:	01-0009-B003

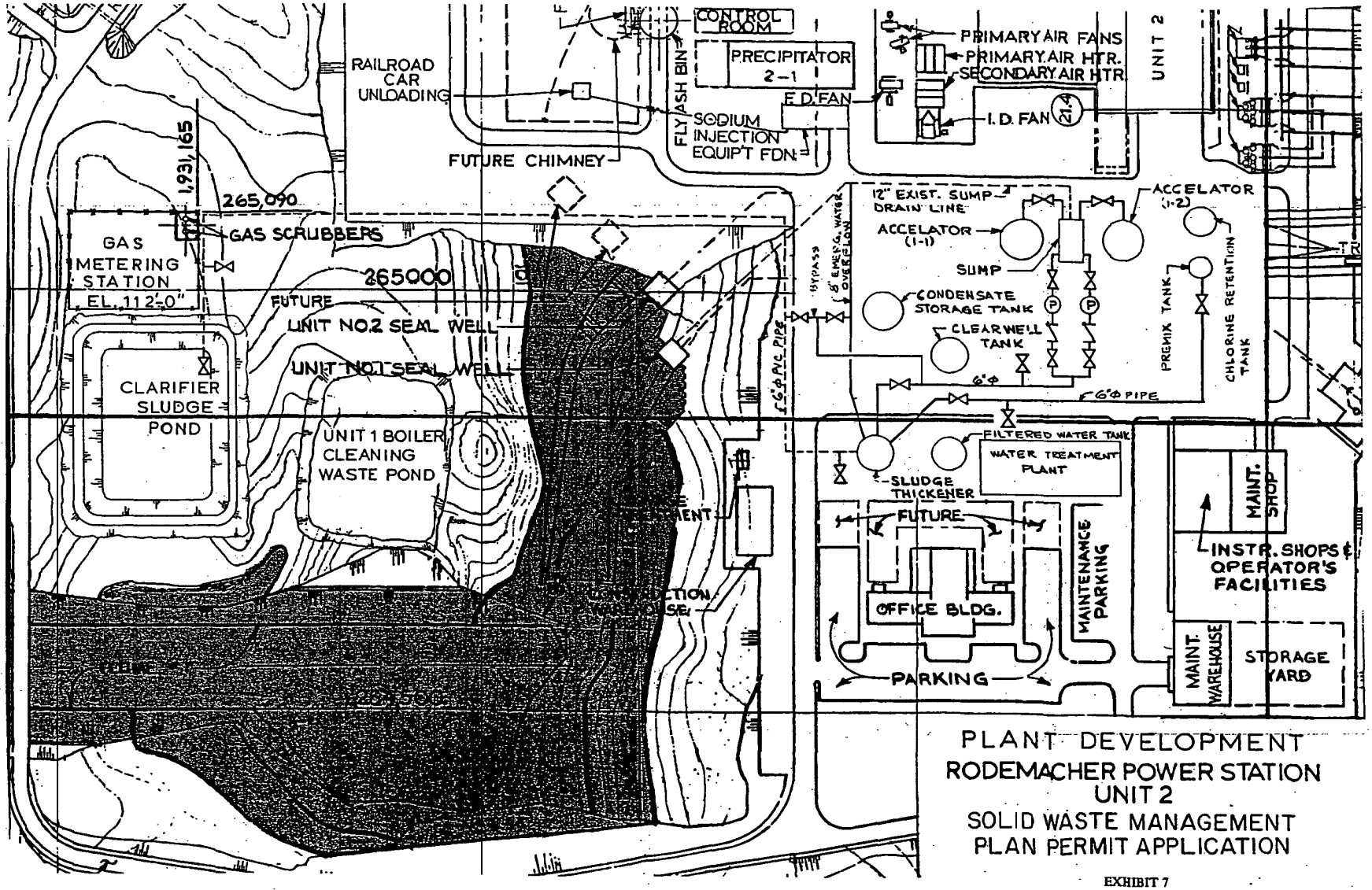
Figure J-1





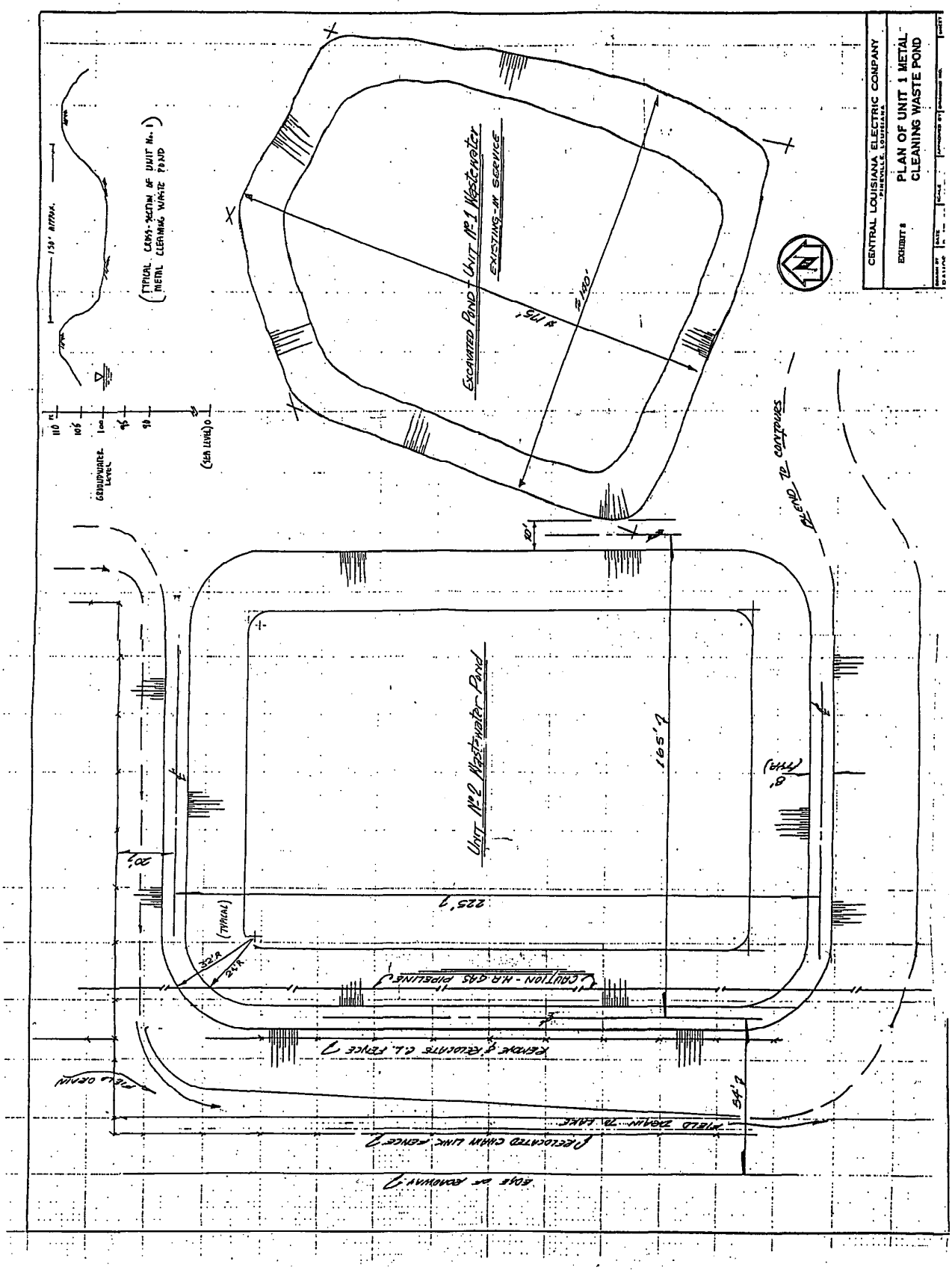
APPENDIX K

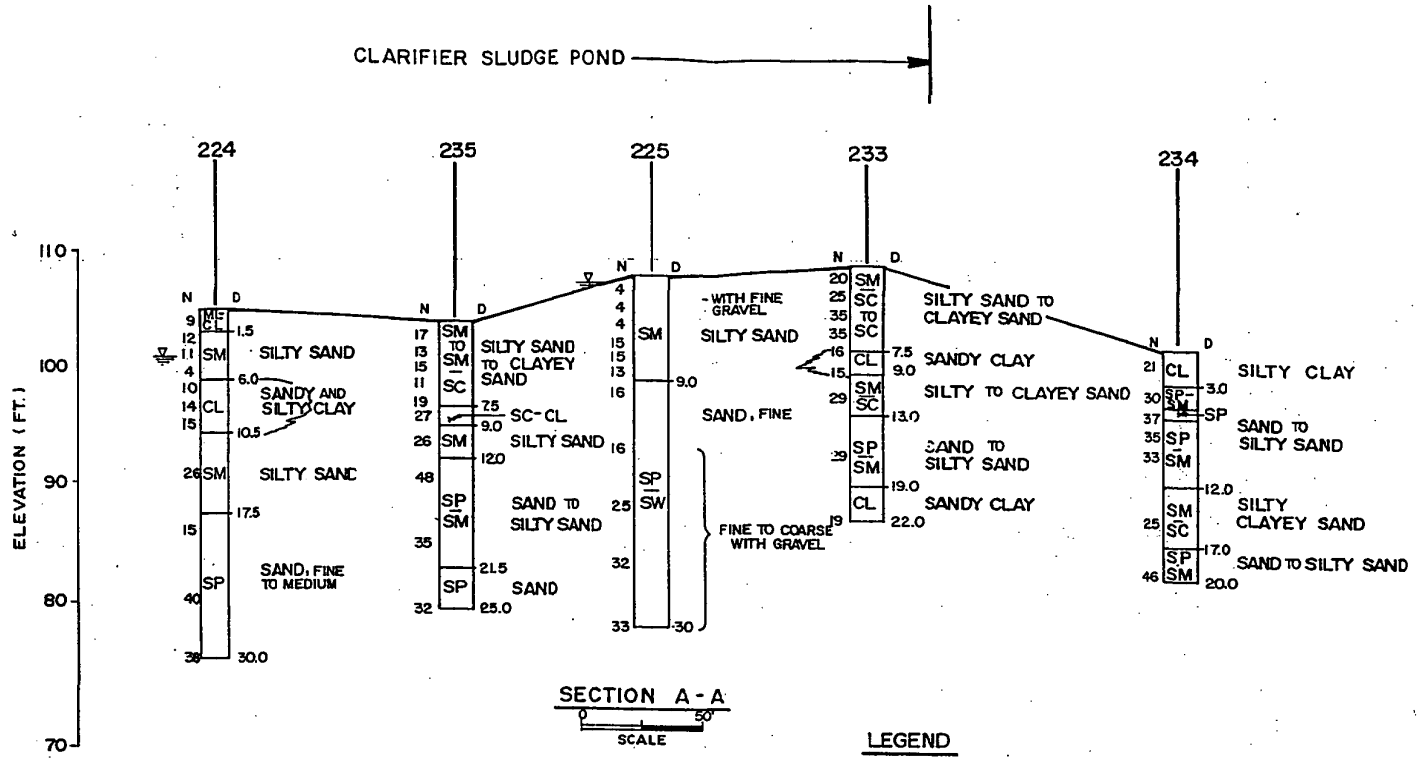
ENGINEERING DATA



PLANT DEVELOPMENT
RODEMACHER POWER STATION
UNIT 2
SOLID WASTE MANAGEMENT
PLAN PERMIT APPLICATION

EXHIBIT 7


CENTRAL LOUISIANA ELECTRIC COMPANY
PINEVILLE, LOUISIANA
EXHIBIT B
PLAN OF UNIT 1 METAL CLEANING WASTE POND
EXCAVATED POND F UNIT NO 1 Wastewater
EXISTING-IN SERVICE
UNIT NO 2 Wastewater Pond
BLEND TO CONTOURS
(TYPICAL CROSS-SECTION OF UNIT No. 1 METAL CLEANING WASTE POND)
GROUNDWATER LEVEL
(SEA LEVEL)
RELOCATED CHAIN LINK FENCE
EDGE OF ROADWAY
CAUTION - NA GAS PIPELINES
REMOVE & RELOCATE C.L. FENCE
(TYPICAL)



GENERALIZED SUBSURFACE DIAGRAM
CLARIFIER SLUDGE POND

RODEMACHER POWER STATION UNIT 2
SOLID WASTE MANAGEMENT PLAN
PERMIT APPLICATION

EXHIBIT 9

APPENDIX L

GROUNDWATER SAMPLING AND ANALYSIS PLAN

CLECO POWER, LLC
RODEMACHER POWER STATION
BOYCE, LOUISIANA

FACILITY I.D. NO. GD-079-0390
PERMIT NOS. P-0005, P-0027, P-0062, AND P-0379

RODEMACHER POWER STATION
SOLID WASTE PERMITTED FACILITIES
GROUNDWATER
SAMPLING AND ANALYSIS PLAN

SEPTEMBER 2006

Prepared By:

Eagle Environmental Services, Inc.
18369 Petroleum Drive
Baton Rouge, Louisiana 70809
(225) 757-0870

Eagle Project No. 01-0020

TABLE OF CONTENTS

LIST OF EXHIBITS

Exhibit

1.0 INTRODUCTION

The purpose of this document is to detail the Groundwater Sampling and Analysis Plan designed to monitor groundwater quality in the uppermost aquifer for the Cleco Power, LLC (Cleco) Rodemacher Power Station. The Rodemacher Power Station will be conducting a detection monitoring program, as required in LAC 33:VII.521.F.5.c and e, as well as LAC 33:VII.709.E.2, 3, and 4. The Rodemacher Power Station operates four solid waste permitted facilities identified as the following:

P-0005 *Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, and Fly Ash Pond*

P-0027 *Unit 1 Metal Cleaning Waste Pond*

P-0062 *Coal Sedimentation Runoff Pond*

P-0379 Ash Management Area

A site map showing the location of the permitted facilities and the associated monitoring wells is shown in Exhibit 1.

The focus of implementation of this Groundwater Sampling and Analysis Plan is to collect and sample groundwater from the uppermost aquifer underlying the permitted Solid Waste facilities for analysis of a selected list of chemical parameters, constituents which are indicator parameters or constituents, or reaction products of the waste, and would provide a reliable indication of the presence of potential contaminants in the groundwater at an early stage. This Groundwater Sampling and Analysis Plan describes the consistent sampling and analysis procedures which will be implemented to ensure that results from detection monitoring sampling events are representative of groundwater quality at the background and downgradient monitoring well locations. This Sampling and Analysis Plan also describes the procedures to detect, report, and verify changes in the groundwater quality.

1.1 Scope of Sampling and Analysis Plan

The purpose of this document is to assist in minimizing the groundwater sample collection as a source of variability through differences in sampling personnel and their individual sampling procedures. This Groundwater Sampling and Analysis Plan addresses the procedures requisite for the proper collection of consistent representative water samples from monitoring wells at the permitted Solid Waste facilities.

This plan is organized into the following sections:

- Section 2.0 describes the site facility, uppermost aquifer, and monitoring well network;
- Section 3.0 describes the detection monitoring parameters;
- Section 4.0 describes the monitoring and sampling procedures;

- Section 5.0 describes the Quality Assurance/Quality Control (QA/QC) procedures;
- Section 6.0 describes the analytical procedures;
- Section 7.0 describes the statistical analysis procedures; and
- Section 8.0 describes the reporting and recordkeeping procedures.

2.0 GROUNDWATER MONITORING SYSTEM

2.1 Site Description

The Rodemacher Power Station is located near Boyce, Louisiana, and currently operates four permitted Solid Waste facilities for the disposal of on-site-generated non-hazardous solid waste at the power station.

2.2 Uppermost Aquifer

The uppermost aquifer underlying the Rodemacher Power Station consists of deposits of fine- to coarse-grained sand deposits with some silt and gravel. The gravels are primarily located at the base of the sand unit. Monitoring wells screened in this unit indicate that groundwater flow is primarily towards the local surface water bodies such as Lake Rodemacher and Bayou Jean de Jean.

2.3 Monitoring Well Network

The proposed groundwater monitoring system for the solid waste facilities is summarized below:

P-0005	Background Well	W-1, W-2, W-22
	Compliance Wells	W-3, W-4, W-5, W-6A, W-10, W-11, W-14, W-15, W-16, W-17, W-18, W-19, W-20
P-0379	Background Well	W-2, W-22
	Compliance Wells	W-3, W-4, W-5, W-14, W-15, W-16, W-17, W-18, W-19, W-20
P-0027	Background Well	W-1, W-2
	Compliance Wells	W-8, W-9
P-0062	Background Well	W-1, W-2
	Compliance Wells	W-7, W-8, W-21

Construction details of these wells are included in Exhibit 1.

Please note that wells W-6A, W-14, W-15, W-16, W-17, W-18, W-19, W-20, W-21, and W-22 are not currently installed. Monitoring well W-6A will replace well W-6. To finalize the design of the groundwater monitoring detection system, these wells will be installed to satisfy the spacing requirements of LAC 33:VII.709.C. The location of the wells and the proposed Point of Compliance is shown in the figure included as Exhibit 1.

The proposed monitoring wells will be constructed in accordance with applicable portions of "Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook," [LDEQ and Louisiana Department of Transportation and Development, December 2000]. The top-of-casings will be surveyed relative to NGVD in order to use groundwater elevation from the wells to evaluate horizontal and vertical groundwater flow.

3.0 DETECTION MONITORING PARAMETERS

The parameters selected by the Rodemacher Power Station during detection monitoring are both inorganic and organic and are also indicative or reaction products of the waste disposed in the permitted Solid Waste facilities, as required by LAC 33:VII.709.E.3.g. Monitoring these parameters will provide a reliable indication of the presence of contaminants in the groundwater. The detection monitoring parameters are:

- pH (field-measured);
- Specific conductance (field-measured);
- Temperature (field-measured);
- Total dissolved solids;
- Alkalinity (mg/l as CaCO3);
- Sulfates;
- Chlorides;
- Total calcium;
- Total copper; and
- Total iron.

These parameters were selected based on several factors, and monitoring the selected parameters will provide a reliable indication of the presence of contaminants in the groundwater underlying the permitted solid waste facilities.

Parameters specific conductance and temperature will not be used for groundwater quality evaluation in regards to statistical evaluation of groundwater quality data. The remaining parameters will provide site-specific groundwater quality data for the Rodemacher Power Station.

4.0 MONITORING AND SAMPLING PROCEDURES

4.1 Groundwater Monitoring Schedule

Initial sampling for detection monitoring will occur after receipt of LDEQ approval of this plan. Initial sampling will include a minimum of four independent samples collected from each well for analysis of the detection monitoring parameters. The minimum of four independent sampling events will be conducted to reflect seasonal variations in groundwater quality. The sampling events may be increased to a number greater than four for statistical analysis requirements. Initial sampling will be initiated following approval from LDEQ.

Sampling and analysis of the groundwater monitoring wells will be conducted every six months for the life of the facility as required by LAC 33:VII.709.E.3.c and d. LAC 33:VII.709.E.3.d also requires detection monitoring for the period of post-closure care.

4.2 Pre-Field Considerations

These procedures must be considered prior to performance of sampling activities. These considerations include but are not limited to:

- Scheduling for analytical services;
- Selecting proper analytical equipment;
- Decontamination of sampling equipment; and
- Selection and acquisition of appropriate sample containers, preservatives, and storage containers.

The facility thoroughly prepares prior to sampling events to ensure that sample collection produces representative samples of the zone monitored and to prevent cross-contamination or tampering with the samples. In preparation of any sample collection activities, a review is made to confirm that all necessary sampling equipment and supplies will be available at the sampling site. In addition, a review of the Detection Monitoring Parameter Specifications (Exhibit 2) is done to determine if any chemical preservatives are needed for the sample containers.

4.3 Well Inspection Procedures

The monitoring wells are protected by locking shrouds and covers. Each monitoring well will be inspected during each groundwater monitoring event for the following items:

1. Evidence of tampering.
2. Presence of intact locking shrouds and covers.
3. Condition of locks.
4. Condition of well pads, paint, and well labels.

Any areas of concern will be noted in the field log book and promptly corrected.

4.4 Sample Collection Procedures

This Groundwater Sampling and Analysis Plan provides for a step-by-step process to collect groundwater samples. A general overview of sampling procedures is listed in the following sections.

4.4.1 Purging and Sampling Equipment

The following list of equipment may be used for well purging and sampling:

- Dedicated or disposable hand bailer
- Hand pump with associated piping
- Positive gas displacement (bladder) pump with air supply and discharge hose
- Centrifugal lift pump and suction hose, or other comparable purging equipment
- Positive electric displacement pump with electric supply and discharge hose
- Peristaltic pump and suction hose, or other comparable purging equipment
- Portable pH meter (with calibration solutions)
- Portable conductivity meter (with calibration solutions)
- Portable temperature meter
- Ice chests (with ice)
- Groundwater collection sheets (field book)
- Chain-of-custody sheets
- Surgical laboratory gloves
- Water level indicator (accuracy 0.01 feet)
- Sample bottles from laboratory
- Sample bottle labels with waterproof pen
- Watch
- Five-gallon containers
- Deionized water
- Liqui-Nox, Alconox, or other non-phosphate detergent
- Polyethylene rope
- Clean paper towels
- Plastic sheeting

4.4.2 Water Level and Well Total Depth Measurement Procedures

Determine the static water level (DTW) in each well below the top of casing (TOC) using a water level indicator or weighted tape. Record the DTW on the field form to the nearest 0.01 foot.

Determine the total depth (TD) in each well below the top of casing (TOC) using a water level indicator or weighted tape. Record the TD on the field form to the nearest 0.01 foot.

An example groundwater collection report form is included as Exhibit 3.

4.4.3 Well Purging Procedures

The following outlines the procedures used to purge the monitoring wells.

1. Calculate the volume of water to be purged from the well (VP) using the following formula:

$VP = 3 (TD - DTW) (\pi r^2) (c)$; where

VP = volume to be purged (gallons)
TD = total depth of well (feet)
DTW = depth to water from top of casing (feet)
$\pi = 3.14$
r^2 = radius of well squared (feet)
c = constant, 7.481 gallons per cubic foot

Note: If the well is evacuated to dryness, no additional purging is necessary.

2. Purge wells by either withdrawal of groundwater with pumps or bailers.

   a. If purging is performed with pumps, purge the well until the required VP has been removed or to dryness, whichever occurs first.

      Record the volume removed on the Groundwater Sampling Data Form. Note any odors, colors, etc. that are observed during pumping on the field notes.

   b. If purging is performed with a bailer, rinse with liberal amounts of deionized water. After cleaning, lower the bailer into the water using clean new polyethylene rope. Bail until the required VP has been removed or to dryness, whichever occurs first. Discard the polyethylene rope when purging is completed.

      Record the purge volume and time on a Groundwater Sampling Data Form. Note any odors, colors, etc. that are observed during bailing on the field notes.

Decontamination procedures for pumps, bailers and other non-dedicated equipment are included in Section 5.1.2.

4.4.4 Sample Collection Procedures

The procedures for sampling monitoring wells are outlined in the following paragraphs. The procedures are to be used after the well has been purged and sufficiently recharged to collect the required sample quantities. Sample bottles with appropriate preservatives will be furnished by an independent analytical laboratory.

Note: The designated background monitoring well(s) shall be sampled first, and then downgradient monitoring wells can be sampled.

The following procedures will be used to collect samples from the monitoring wells.

1. Put on new surgical/lab gloves for each sampling location.

2. Organize and lay out sampling equipment, bottles, and logging information.

3. Verify that labels on sample containers, groundwater collections report sheets, and chain-of-custody forms are consistent with the well number being sampled. All collection bottles shall be pre-washed by the laboratory. Water-resistant marking shall be used to label the sample bottles and the container label shall be checked for proper markings.

4. Samples will be collected using the dedicated bladder pump and associated tubing or with dedicated bailer.

   If collecting via pump, use the following steps:

   Carefully pour the water into the analytical sample bottles, taking care not to excessively agitate water in the sample container. No dirt or dust should be allowed to blow into the bottles or bottle caps.

   If collecting via bailer, use the following steps:

   Purge the well by slowly lowering the bailer into the well and allowing water to fill the bailer, retrieving the bailer, and then pouring the water into a bucket or plastic tub. The bucket or plastic tub can be used to quantify the volume of water purged from the well.

Collect samples by slowly lowering the bailer into the water, allowing it to fill. Take care to not excessively agitate water in the well with the bailer. When the bailer is full, carefully retrieve the bailer and carefully pour the water into the analytical sample bottles. Allow no dirt or dust to blow into the bottles or bottle caps.

5. Use a portion of the first sample retrieved for immediate measurement of the field parameters pH, specific conductance, and temperature. Pour water into a separate jar (see Section 4.4.5 for field measurement procedures) to determine these parameter readings. Calibrate the field instruments prior to sample collection activities, and then after completion of sampling activities. Document all calibration records in the field log book.

6. Carefully pack the samples in ice chests or coolers packed with ice or freezer packs as soon after collection as possible. To minimize possible leakage, arrange samples and ice so that the sample containers will not make contact during shipment.

7. Complete the chain-of-custody transfer record for the sample. An example chain-of-custody transfer form is included in Exhibit 4.

8. Transport the samples, with the chain-of-custody form(s), to the independent analytical laboratory. Enclose the chain-of-custody form(s) in a waterproof bag. Transport samples the same day they are collected, if possible.

Sample collection notes:

Do not overfill sample bottles with holding preservatives. While filling the bottle and once the sample is in the bottle, do not allow anything to touch the bottle opening or the sample inside. Never stick anything into the sample.

To the extent practicable, keep samples out of direct sunlight.

4.4.5 Field Measurements and Procedures

Field measurements and comments will be recorded on the Groundwater Sampling Data Form (example, Exhibit 3). Field measurements of pH, specific conductance, and temperature will be taken and recorded on the Groundwater Sampling Data Form. The instruments shall be properly calibrated, and calibration data shall be recorded in the field log book. Calibrations shall be done in accordance with the manufacturer's recommendations. If any procedures are not performed as prescribed by

the manufacturer, the reason must be stated on the field notes. The appearance of the water purged from the well will also be noted.

4.4.6 Well Maintenance/Post-Collection Procedures

If excessive silt is detected in the base of a monitoring well, the well shall be redeveloped prior to the next sampling event.

Following completion of field activities, the following will be performed:

1. Relock all monitoring well locks.

2. Thoroughly clean all field equipment.

3. Report broken or damaged equipment.

4.4.7 Sample Preservation

Samples collected will be immediately preserved in the field by placing them in an insulated ice chest containing ice and chilling them to temperatures at or below 4 degrees centigrade. Sample bottles provided by an independent analytical laboratory shall be prepared with the proper preservatives, if preservatives are necessary for the analyte.

4.4.8 Chain-of-Custody Control

Custody of groundwater samples will be documented by completing a chain-of-custody record after sample collection. The chain-of-custody is a legal document and will accompany the collected groundwater samples from the time of collection until analysis is complete and the analytical report is issued. The original chain-of-custody form shall accompany the samples through independent analytical laboratory analysis, with copies retained at any intermediate step. A member of the sampling team must be the first signature relinquishing the samples on the chain-of custody form. All persons receiving or relinquishing possession of the samples must sign the form. Duplicated and QA/QC samples shall be identified on the chain-of-custody form in order to provide proper identification to the laboratory. A sample chain-of-custody form is included in Exhibit 4.

Upon completion of the analysis, the analytical laboratory shall complete the Chain-of-Custody Form, file a copy, and send a copy to the appropriate facility representative along with the analytical results.

4.4.9 Sample Shipment/Transport

Prior to shipment, the following will be checked.

1. Sample bottles will be double-checked for leaks, cracks, proper labeling, and sufficient preservative (ice).

2. The chain-of-custody will be completed accurately. The samples shall be logged by the sampler on the Chain-of-Custody Form and the samples will be transported, with as few transfers as possible, immediately to the independent analytical laboratory. The laboratory will be notified that the samples will be arriving.

3. If direct delivery is done by field personnel of the samples to the laboratory, the samples shall be rechecked for breakage or leakage that may have occurred during transport.

4. Samples will then be signed over to laboratory personnel according to chain-of-custody procedures. No samples will be accepted that are not properly labeled and sealed. Upon receipt, the authorized laboratory personnel will store and/or prepare the samples for analysis, taking into consideration sample holding times for the parameters for which the sample will be analyzed.

5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

5.1 Field Quality Control

Field quality control measures, as described earlier in this document, are proven procedures for collecting representative samples, calibrating field testing equipment, preserving samples for analysis, and documenting chain-of-custody. These QA/QC measures contribute to sampling events' producing monitoring results that are reliable indications of groundwater quality.

5.1.1 Field Documentation

Field activities will be controlled by adherence to procedural requirements referred to in this plan, and documented primarily thorough use of a daily log for recording field activities. Pre-printed forms may be used as an aid to ensure complete data recovery and for data reduction in the office. Documentation will include the following:

- calibration check information;
- field measurement data, including water level and well-purging measurements;
- field activity notebooks;
- sample labels; and
- chain-of custody forms.

5.1.2 Decontamination Procedures

Portable and non-dedicated sampling equipment must be decontaminated to minimize cross contamination between samples. Equipment including pumps, weighted tape measures, water-level indicator tapes, and bailers will be decontaminated and protected from ambient contamination following each use. Equipment decontamination will be performed in an area relatively free of ambient organic vapors and dust.

Miscellaneous flow measurement and sampling equipment shall be washed with laboratory detergent, rinsed with deionized water, and dried before being stored.

Field instrumentation such as pH meter probes and conductivity probes should be rinsed with deionized water before storage.

General Decontamination Procedure

1. Rinse/wash wetted parts of equipment that may enter the groundwater with deionized water. If necessary, a non-phosphate detergent such as Alconox or Liqui-Nox may be used during this rinse.

2. Allow equipment to air dry.

3. Wrap with clean protective material unless equipment is to be used again immediately.

After decontamination, field equipment and sample containers shall be stored in a contaminant-free environment after being cleaned using the procedures outlined in this document.

Non-Dedicated Submersible Pumps and Hoses

1. Pump a sufficient amount of soapy water through the hose to flush out any residual purge water.

2. Using a brush, scrub the exterior of the contaminated hose and pump with soapy water. Rinse the soap from the outside of the hose with tap water. Next rinse the hose with deionized water and recoil onto the spool.

3. Pump a sufficient amount of water through the hose to flush out soapy water.

4. Pump a sufficient amount of deionized water through the hose to flush out the tap water, then purge with the pump in reverse mode, if applicable.

5. Rinse the outside of the pump and hose with deionized water (approximately 1/4 gallon).

6. Equipment will be wrapped to prevent contamination during storage or transit.

5.1.3 Field and Equipment (Rinsate) Blanks

In the event non-dedicated sampling equipment is used, then field and equipment (rinsate) blanks shall be collected in the field to detect and quantify potential chemical artifacts originating from sampling activities. The field blank is produced in the field by pouring analyte-free water into the appropriate sample containers. The equipment (rinsate) blank is produced in the field by rinsing the sampling equipment with analyte-free water and collecting the rinsate in appropriate sample containers. These blanks are subjected to the same laboratory analysis as the samples. The concentration levels of any contaminant found in the blanks will be noted and compared to sample results.

5.2 Laboratory Quality Control

The Rodemacher Power Station will submit the groundwater samples to a qualified independent laboratory that performs testing according to documented and approved procedures by trained personnel using calibrated equipment. QA/QC procedures, including field blanks, laboratory spikes and blanks, precision accuracy of analyses, and detection limits will conform to those specified in U.S. EPA *Test Methods for Evaluating Solid Waste* (SW-846).

6.0 ANALYTICAL PROCEDURES

Groundwater monitoring samples are analyzed using laboratory methods which conform to test methods outlined in the most recent approved editions of U.S. EPA *Test Methods for Evaluating Solid Waste* (SW-846), *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020), or *Standard Methods for the Examination of Water and Wastewater.* The test method, method detection limit, and practical quantitation limit for each parameter monitored are provided in Exhibit 2 (Detection Monitoring Parameter Specifications).

7.0 GROUNDWATER DATA STATISTICAL EVALUATION

The statistical method(s) proposed by the facility for evaluation of groundwater quality data will be submitted to LDEQ as a permit modification within 90 days after completion of initial sampling event, in accordance with LAC 33:VII.521.F.5.e. and LAC 33.VII.709.E.2.e.

8.0 REPORTING AND RECORDKEEPING

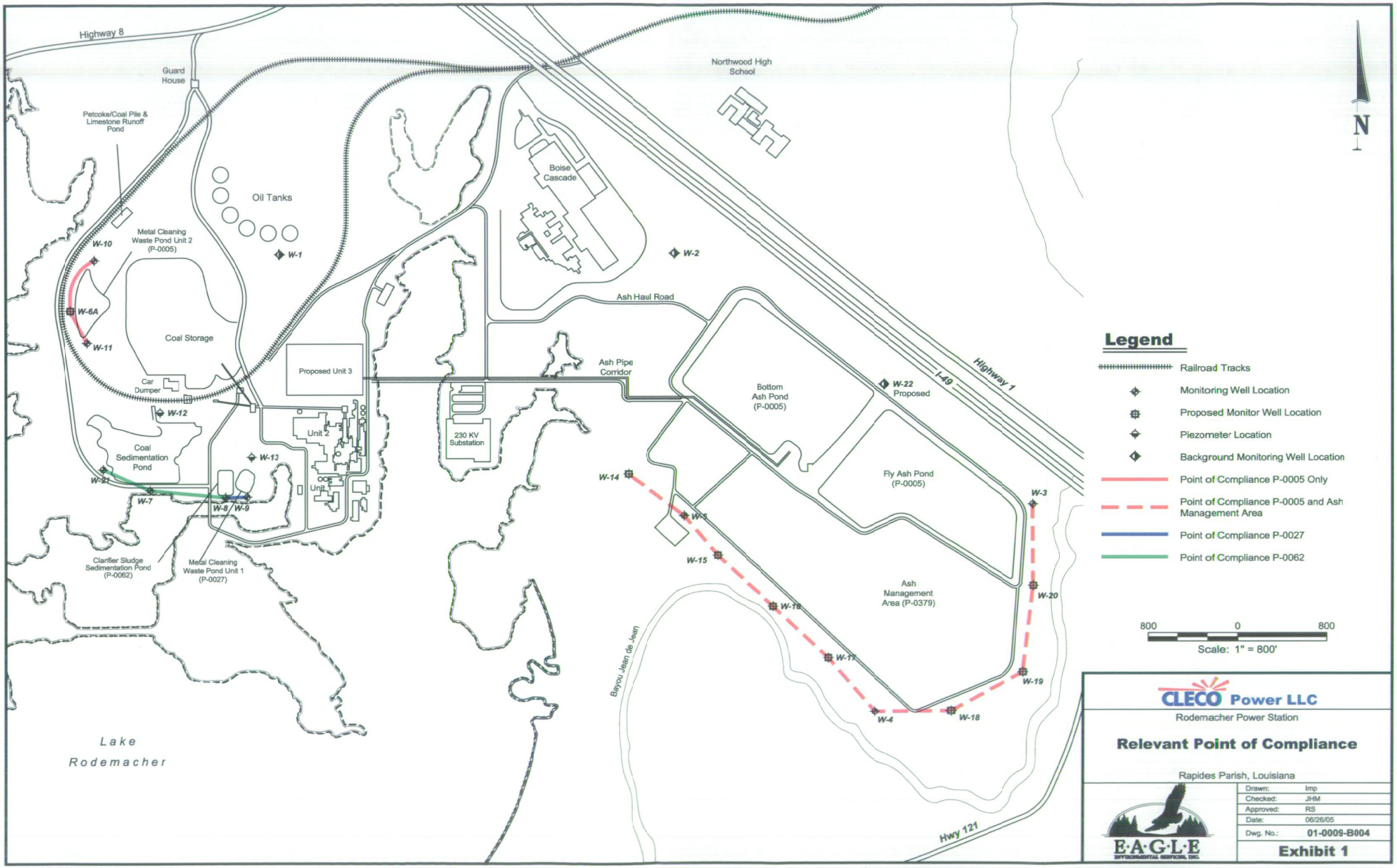
Within 90 days after completion of field activities for each detection monitoring sampling event, the Rodemacher Power Station will submit the required number of reports to LDEQ that includes:

- Analytical results of groundwater samples;
- Documentation of the chain-of-custody of sampling and analyses;
- A scaled potentiometric surface map showing monitoring well locations, groundwater elevations with respect to mean sea level or equivalent for the stratum monitored;
- An isopleth map for each monitoring well of all detection monitoring parameters, or plots of each monitoring well by concentration of parameters versus time; and
- A statement of whether a statistically significant difference in concentration over background concentrations is detected.

The Rodemacher Power Station will maintain on site copies of each report for the life of the facility, as well as the duration of the post-closure care period, as required in LAC 33:VII.711.C.1.b.

EXHIBIT 1

MONITORING WELL LOCATIONS – RELEVANT POINT OF COMPLIANCE



SUMMARY OF GROUNDWATER MONITORING SYSTEMS
CLECO RODEMACHER POWER STATION

P-0005 = Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond

Background	W-1, W-2, W-22 (proposed)
Compliance	W-3, W-4, W-5, W-6A (proposed),W-10, W-11, W-14 (proposed), W-15 (proposed), W-16 (proposed), W-17 (proposed), W-18 (proposed), W-19 (proposed), W-20 (proposed)

P-0379 = Ash Management Area

Background	W-2, W-22 (proposed)
Compliance	W-3, W-4, W-5, W-14 (proposed), W-15 (proposed), W-16 (proposed), W-17 (proposed), W-18 (proposed), W-19 (proposed), W-20 (proposed)

P-0027 = Unit 1 Metal Cleaning Waste Pond

Background	W-1, W-2
Compliance	W-8, W-9

P-0062 = Coal Sedimentation Pond

Background	W-1, W-2
Compliance	W-7, W-8, W-21 (proposed)

WELL CONSTRUCTION DATA
CLECO RODEMACHER POWER STATION

Well Number	W-1	W-2	W-3	W-4	W-5
Existing or Proposed	Existing	Existing	Existing	Existing	Existing
Monitoring Well (MW) or Piezometer (P)	MW	MW	MW	MW	MW
Background (B) or Compliance (C)	B	B	C	C	C
Facility Monitored	P-0001 P-0027, P-0062	P-0001 P-0027, P-0062, P-0379	P-0005, P-0379	P-0005, P-0379	P-0005, P-0379
Casing Elevation (feet msl)	148.65	151.80	93.40	94.80	95.20
Well Depth (feet bgs)	79.15	96.20	77.00	45.10	42.60
Screen Length (feet)	10	10	10	10	10
Screened Interval (from __ feet msl)	79.5	68.8	25.7	60.1	62.3
(to __ feet msl)	69.5	58.8	15.7	50.1	52.3
Screen Slot Size (inches)	0.010	0.010	0.010	0.010	0.010
Casing Diameter (inches) & Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Type of Grout	C/B	C/B	C/B	C/B	C/B

Well Number	W-6 A	W-7	W-8	W-9	W-10
Existing or Proposed	Proposed	Existing	Existing	Existing	Existing
Monitoring Well (MW) or Piezometer (P)	MW	MW	P	P	P
Background (B) or Compliance (C)	C	C	--	--	--
Facility Monitored	P-0005	P-0062	P-0027	P-0027	P-0005
Casing Elevation (feet msl)	TBD	117.30	117.60	107.20	138.41
Well Depth (feet bgs)	TBD	50.30	46.20	30.40	48.20
Screen Length (feet)	10	10	10	10	10
Screened Interval (from __ feet MSL)	TBD	76.4	84.2	86.8	100.21
(to __ feet MSL)	TBD	66.4	74.2	76.8	90.21
Screen Slot Size (inches)	0.010	0.010	0.010	0.010	0.010
Casing Diameter (inches) & Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Type of Grout	C/B	C/B	C/B	C/B	C/B

Abbreviations:
P-0005 = Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond
P-0027 = Unit 1 Metal Cleaning Waste Pond
P-0062 = Coal Sedimentation Pond
-- = not applicable
TBD = to be determined
~ = estimated dimension
MSL = mean sea level
bgs = below ground surface
PVC = polyvinyl chloride
C/B = cement/bentonite

WELL CONSTRUCTION DATA
CLECO RODEMACHER POWER STATION

Well Number	W-11	W-12	W-13	W-14	W-15
Existing or Proposed	Existing	Existing	Existing	Proposed	Proposed
Monitoring Well (MW) or Piezometer (P)	P	P	P	MW	MW
Background (B) or Compliance (C)	C	C	--	C	C
Facility Monitored	P-0005	--	--	P-0005	P-0005, P-0379
Casing Elevation (feet msl)	138.15	115.66	119.17	TBD	TBD
Well Depth (feet bgs)	48.97	47.56	33.05	TBD	TBD
Screen Length (feet)	10	10	10	10	10
Screened Interval (from __ feet msl)	99.18	78.11	86.12	TBD	TBD
(to __ feet msl)	89.18	68.11	76.12	TBD	TBD
Screen Slot Size (inches)	0.010	0.010	0.010	0.010	0.010
Casing Diameter (inches) & Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Type of Grout	C/B	C/B	C/B	C/B	C/B

Well Number	W-16	W-17	W-18	W-19	W-20
Existing or Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
Monitoring Well (MW) or Piezometer (P)	MW	MW	MW	MW	MW
Background (B) or Compliance (C)	C	C	C	C	C
Facility Monitored	P-0005, P-0379	P-0005, P-0379	P-0005, P-0379	P-0005, P-0379	P-0005
Casing Elevation (feet msl)	TBD	TBD	TBD	TBD	TBD
Well Depth (feet bgs)	TBD	TBD	TBD	TBD	TBD
Screen Length (feet)	10	10	10	10	10
Screened Interval (from __ feet MSL)	TBD	TBD	TBD	TBD	TBD
(to __ feet MSL)	TBD	TBD	TBD	TBD	TBD
Screen Slot Size (inches)	0.010	0.010	0.010	0.010	0.010
Casing Diameter (inches) & Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Type of Grout	C/B	C/B	C/B	C/B	C/B

Abbreviations:
P-0005 = Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond
P-0027 = Unit 1 Metal Cleaning Waste Pond
P-0062 = Coal Sedimentation Pond
-- = not applicable
TBD = to be determined
~ = estimated dimension
MSL = mean sea level
bgs = below ground surface
PVC = polyvinyl chloride
C/B = cement/bentonite

WELL CONSTRUCTION DATA
CLECO RODEMACHER POWER STATION

Well Number	W-21	W-22
Existing or Proposed	Proposed	Proposed
Monitoring Well (MW) or Piezometer (P)	MW	MW
Background (B) or Compliance (C)	C	B
Facility Monitored	P-0062	P-0005, P-0379
Casing Elevation (feet msl)	TBD	TBD
Well Depth (feet bgs)	TBD	TBD
Screen Length (feet)	10	10
Screened Interval (from __ feet msl)	TBD	TBD
(to __ feet msl)	TBD	TBD
Screen Slot Size (inches)	0.010	0.010
Casing Diameter (inches) & Material	2" PVC	2" PVC
Type of Grout	C/B	C/B

Abbreviations:
P-0005 = Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond
P-0027 = Unit 1 Metal Cleaning Waste Pond
P-0062 = Coal Sedimentation Pond
-- = not applicable
TBD = to be determined
~ = estimated dimension
MSL = mean sea level
bgs = below ground surface
PVC = polyvinyl chloride
C/B = cement/bentonite

EXHIBIT 2

DETECTION MONITORING PARAMETER SPECIFICATIONS

DETECTION MONITORING PARAMETER SPECIFICATIONS
CLECO RODEMACHER POWER STATION

PARAMETER	FACILITY	CONTAINER	PRESERVATION METHOD	MAXIMUM HOLDING TIME	ANALYTICAL METHOD	PRACTICAL QUANTITATION LIMIT
pH	P-0005, P-0027, P-0062, P-0379	P, G	NA	Immediate	Field Measurement	0.1 standard unit
Specific Conductance	P-0005, P-0027, P-0062, P-0379	P, G	NA	Immediate	Field Measurement	1 micromhos/centimeter
Temperature	P-0005, P-0027, P-0062, P-0379	P, G	NA	Immediate	Field Measurement	0.1 degrees Celsius
Total Dissolved Solids	P-0005, P-0027, P-0062, P-0379	P, G	Cool to 4°C	7 days	2540 (SM), 160.1 (MCA)	10 parts per million
Alkalinity	P-0005, P-0027, P-0062, P-0379	P, G	Cool to 4°C	14 days	2320B (SM), 310.1 (MCA)	2 parts per million
Sulfates	P-0005, P-0027, P-0062, P-0379	P, G	Cool to 4°C	28 days	4500 (SM), 300.0 (MCA)	1 parts per million
Chlorides	P-0005, P-0027, P-0062, P-0379	P, G	Cool to 4°C	28 days	4500 (SM), 300.0 (MCA)	1 parts per million
Calcium	P-0005, P-0027, P-0062, P-0379	P, G	HNO_3 to pH < 2	6 months	3500 (SM), 200.7 (MCA), 6010 (SW-846)	80 micrograms/Liter
Copper	P-0005, P-0027, P-0062, P-0379	P, G	HNO_3 to pH < 2	6 months	3500 (SM), 200.7 (MCA), 6010 (SW-846)	5 micrograms/Liter
Iron	P-0005, P-0027, P-0062, P-0379	P, G	HNO_3 to pH < 2	6 months	3500 (SM), 200.7 (MCA), 6010 (SW-846)	10 micrograms/Liter

Abbreviations:
P-0005 = Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond
P-0027 = Unit 1 Metal Cleaning Waste Pond
P-0062 = Coal Sedimentation Pond
P-0379 = Ash Management Area
P, G = plastic or glass
SM = Standard Methods for the Examination of Water and Wastewater
MCA = Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020
SW-846 = Test Methods for Evaluating Solid Waste

EXHIBIT 3

GROUNDWATER SAMPLING DATA FORM

CLECO POWER LLC
GROUNDWATER SAMPLING LOG

Client Name:	Cleco Power LLC	Site Name:	Rodemacher Power Station
Well Name:		Location:	Boyce, LA

Notes:

PURGING DATA

Total Well Depth	Depth to Water	Well Diameter / Capacity	Height of Water Column

(Total Depth - Depth to Water) x Well Capacity = 1 Well Volume = 3 Well Volumes =

Top of Casing Elevation	Depth to Water	Water Elevation

(Well Elevation - Depth to Water) = Water Elevation

Purge Initiated	Purge Ended	Total Purged

FIELD MEASUREMENTS

TIME				
VOLUME PURGED (GAL)				
CUMUL VOLUME PURGED (GAL)				
PURGE RATE (GPM)				
TEMPERATURE (Degrees C)				
SPECIFIC CONDUCTANCE (µmhos/S)				
pH (s.u.)				
APPEARANCE				
ODOR				

Weather:

SAMPLING DATA

SAMPLING DATE	SAMPLE TIME	SAMPLE METHOD

SAMPLE DEVICE	COMPOSITION OF DEVICE
SAMPLED BY / AFFILIATION	LABORATORY ANALYSES BY

PARAMETERS

ANALYSIS	FILTERED	QUANTITY	TYPE	SIZE	PRESERVATIVE

EXHIBIT 4

CHAIN-OF-CUSTODY FORM (SAMPLE)

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 167540

0605 0980 page 1 of 2

Client Name: EAGLE ENV SVC

Address: 10369 Petroleum Dr. Bossier City LA 70809

Phone/Fax: 225/757-0870 225/757-8855

Client Contact: R STAPLEHURST Email: rstapleh@eagleenv.com

Project Name/No.: CLECO Dolet Hills Power Station

Site Name: Dolet Hills Power Station

Site Location: MANSFIELD LA

Invoice To: RESPONDENT EAGLE Ph: 225/757-0870

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil/solid SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: ACIDITY, TDS, SULFATE, SULFIDE	Requested Analysis: Metals Ca, Fe								
FIELD BLANK 052406	052406	1020		✓	W	P,P	1,8	X,2	2	✓	✓								2
RINSATE 052406	052406	1030		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-1 (10) 052406	052406	1045		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-2A 052406	052406	1445		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-3 052406	052406	1415		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-4 052406	052406	1345		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-5 052406	052406	1330		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-6A 052406	052406	1120		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-7 052406	052406	1140		✓	W	P,P	1,8	X,2	2	✓	✓								2
MW-8A 052406	052406	1250		✓	W	P,P	1,8	X,2	2	✓	✓								2

Client/Consultant Remarks:

Laboratory remarks: (3 w) ( ) <2

Intact? Y N

Ice? Y N

Temp: 4.5C

Special Detection Limits (specify):

PM review (initial):

Requested TAT

Contract ☐ 72hr ☐

24hr ☐ Standard ☒

48hr ☐

Other ☐ _____

Special Reporting Requirements Results: Fax ☒ Email ☐ PDF ☒

Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

	date	time
1. Relinquished by Sampler:	052406	1540
2. Received by:		
3. Relinquished by:	052406	1845
4. Received by:		
5. Relinquished by:	date	time
6. Received by Laboratory:		

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 167539

page 2 of 2

Client Name: EAGLE ENV SVCS

Address: 10314 Petroleum Drive Baton Rouge LA 70809

Phone/Fax: 225/ 757-0870 225/ 757-0877

Client Contact: R STARNAUT Email: rstarnaut@eagleenv.com

Project Name/No.: Cleco Power Dolet Hills Power Station

Site Name: DOLET HILLS POWER STATION

Site Location: MANSFIELD LA

Invoice To: R STARNAUT/EAGLE Ph: 225/757-0870

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: AUKAWTPS, TDS, SULFATE, SULFITE	Requested Analysis: METALS CA, SE							
MW-9 052406	052406	1210		✓	W	P,P	1,8	X,2	2	✓	✓							2

Client/Consultant Remarks:

Laboratory remarks: (BW) 12

SOLDEL

Intact? Y N

Ice? Y N

Temp: 4.5C

PM review (initial):

Special Detection Limits (specify):

Requested TAT

Contract ☐ 72hr ☐

24hr ☐ Standard ☑

48hr ☐

Other ☐ _____

Special Reporting Requirements: Results: Fax ☐ Email ☑ PDF ☑

Standard QC ☑ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

	date	time		date	time
1. Relinquished by Sampler:	052406	1545	2. Received by:		
3. Relinquished by:	5/24/06	18:45	4. Received by:		
5. Relinquished by:	date	time	6. Received by Laboratory:		

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

APPENDIX M

CLOSURE PLAN

Closure Plan for Unit 1 Metal Cleaning Waste Pond
Cleco Power, LLC
Rodemacher Power Station

J. Facility Closure. Standards governing facility closure are contained in LAC 33:VII.711.E (Type I and II landfills), LAC 33:VII.713.E (Type I and II surface impoundments), LAC 33:VII.715.E (Type I and II landfarms), LAC 33:VII.717.I (Type I-A and II-A facilities), LAC 33:VII.721.D (construction and demolition debris and woodwaste landfills), LAC 33:VII.723.D (Type III composting facilities), and LAC 33:VII.725.D (Type III separation facilities)

1. The closure plan for all facilities must include the following:

a. the date of final closure;

It is anticipated that Cleco site operations will continue into the foreseeable future, the life of the surface impoundments is estimated for this closure plan to be at least 15 years.

If the quantity of sludge generated in the surface impoundment interferes with the required operating depth and freeboard level, then the sludge will be excavated and placed in the Fly Ash Pond (P-0005). This measure will ensure that the surface impoundment will be able to operate for the entire life span. Therefore, the estimated date of proposed closure of the solid waste facilities is 2020.

b. the method to be used and steps necessary for closing the facility; and

The following procedure is the planned course of action to close the facility:

1) Portable pumps will be used to transfer residual wastewater from the Unit 1 Metal Cleaning Waste Pond.
2) After the free liquids are removed from the facility, the liquids in the Unit 1 Metal Cleaning Waste Pond will be discharged through Outfall 601 or 111of LPDES Permit No. LA0008063
3) The solid material or sediment will be excavated and then placed on the Fly Ash Pond (P-0005). The sludges in the pond are distinguishable by color, and a visual inspection will determine when all the sludges are removed. The excavated area will then be regraded and seeded to prevent erosion. After clean closure, the Unit 1 Metal Cleaning Waste Pond will no longer be a waste disposal facility.
4) The excavated areas of the surface impoundment will be divided into sections based on sampling protocol in the most recent version of SW-846 and a sample from each section will be analyzed and compared to the background soil sample to determine if any contamination exists. Background soil samples will be taken at a site on the facility that has not been impacted by facility operations. If the results of the soil sample in the excavated area are approximately equal to or less than the background for copper, then it will be assumed that all solid waste has been removed.
5) If any of the confirmatory analyses indicate that the indicator parameter is significantly higher than the background values, then further excavation and sampling in the area(s) with the high values (hot spots) may be

required. This procedure will continue until the analytical results are reasonably comparable to the confirmatory values.

6) After confirmatory analytical results indicate that the former surface impoundments are clean, the LDEQ will be notified of completion of all elements of the closure operation and a final inspection will be requested.
7) The groundwater monitoring wells installed to detect leakage from the facilities will be plugged and abandoned in accordance with applicable requirements of the "Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook," December 2000, developed by the LDEQ and Louisiana Department of Transportation and Development or most recent update.
8) Following the clean closure notification, the levees of the surface impoundment will be leveled to original grade and seeded with a suitable grass species and fertilized to control erosion.
9) Equipment associated with the facility will be cleaned and salvaged for reuse.

A Quality Assurance/Quality Control (QA/QC) Procedure has been established to minimize potential sources of contamination during the sampling of the underlying soil at the facility and includes the following key elements:

- The sampling equipment will be thoroughly cleaned before sampling and between sampling locations with biodegradable soap and a stiff bottle brush, as needed, followed by rinsing with distilled water.
- Field sampling personnel will wear plastic disposable gloves at all times during sampling and will change gloves between collecting each sample to minimize the potential for cross-contamination.
- Field sampling personnel will complete a Daily Field Log on each day of the sampling operation for documentation purposes of events that may effect the quality of the analytical results. Items to be included on the daily log include description of daily activities, weather conditions, changes in sampling procedure, and other pertinent information.
- Soil samples will be placed in pre-cleaned glass jars.
- Sample containers will be labeled with a unique sample identification number, date, sampler's initials, and parameters for analyses.
- Standard chain-of-custody forms will accompany all samples to a licensed qualified analytical lab. A general practice of minimal transfers of sample bottles and recordkeeping will provide adequate chain-of-custody control.
- The field personnel are responsible for the custody and care of collected samples until the containers have been transferred to the laboratory. The field sampler and laboratory custodian sign the Chain-of-Custody form. The field sampler retains a copy of the form and the laboratory keeps the original form.
- Sampling holding times will be minimized and shall not exceed those listed in EPA SW-846.
- Analytical procedures will be in accordance with EPA SW-846.

c. the estimated cost of closure of the facility, based on the cost of hiring a third party to close the facility at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive.

The estimated cost of closure of the Unit 1 Metal Cleaning Waste Pond in 2005 dollars is $74,000 as detailed in the following table.

OPERATION	CALCULATION	ESTIMATED COST*
Mobilization/Demobilization	Lump sum	$20,000
Dewater surface impoundment	Approx. 100,000 gallons, pumped at rate of 3,000 gpd, $650 per day per pump	$21,500
Dispose remaining sludges in Fly Ash Pond	Approx. 1,000 yd^3 @ $6.00/yd	$6,000
Sampling and Testing	$16,500	$16,500
Certification Package	$5,000	$5,000
Regrade/Level	50 hours @ $100.00/hour	$5,000
TOTAL		**$74,000**

* = In 2005 dollars.

Cleco will notify the administrative authority within 15 days of any adjusted cost estimate in the event a change in closure plans occurs, and within 30 days after each anniversary of the date on which the first cost estimate was prepared on the basis of the *Consumer Price Index Inflation Calculator* or a re-estimation of the closure and post-closure costs in accordance with LAC 33:VII.727.A.2.b.i and ii. Cleco will revise the cost estimate whenever a change in the closure/post-closure plans increases or decreases the cost of the closure.

2. The closure plan for Type I and II landfills and surface impoundments must include:

a. a description of the final cover and the methods and procedures used to install the cover;

Cleco intends to remove all solid waste and contaminated soil within the Unit 1 Metal Cleaning Waste Pond to obtain a clean closure. As part of the clean closure, the site will be graded to the original ground elevation and seeded and fertilized to allow for vegetative growth to prevent erosion.

b. an estimate of the largest area of the facility ever requiring a final cover at any time during the active life;

Closure Plan for Unit 1 Metal Cleaning Waste Pond
Cleco Power, LLC
Rodemacher Power Station

The Unit 1 Metal Cleaning Waste Pond will be clean-closed and will not require final cover.

c. an estimate of the maximum inventory of solid waste ever on-site over the active life of the facility; and

The maximum volume of solid waste within the Unit 1 Metal Cleaning Waste Pond is estimated to be approximately 9,000 cubic yards.

d. a schedule for completing all activities necessary for closure.

The Closure Schedule below lists the activities necessary to complete closure and the estimated amount of time required to complete these tasks.

OPERATION	LENGTH (days)	ACCUMULATED TIME (days)
Set Up and Mobilize	2	2
Dewater Pond	20	22
Remove/Apply Sludges to Fly Ash Pond	20	42
Sampling Event	7	49
Submit Samples to Laboratory for Analysis	28	77
Review Analytical Data	3	80
Submit Confirmatory Results to LDEQ Obtain Clean Closure Approval from LDEQ	28	108
Abandon Monitoring Wells	5	113
Grade to Original Ground Level	50	163
Seed and Fertilize	14	177
Clean Up and Demobilize	7	184

As previously stated, it is anticipated that the surface impoundments will continue to operate until at least 2020. Prior to closure, LDEQ will be notified in writing at least 90 days prior to the anticipated start of closure.

3. The closure plan for all Type I and II facilities and Type III woodwaste and construction/demolition debris facilities shall include the following:

a. the sequence of final closure of each unit of the facility, as applicable;

The sequence of final closure of each unit of the facility is listed in the response given for LAC 33:VII.521.J.2.d.

b. a drawing showing final contours of the facility; and

As a result of clean closure, the site will be returned to its original condition and contours. The Area Master Plan depicts the contours for the Cleco RPS site.

c. **a copy of the document that will be filed upon closure of the facility with the official parish recordkeeper indicating the location and use of the property for solid waste disposal, unless the closure plan specifies a clean closure.**

Cleco's closure plan provides for a clean closure for the Unit 1 Metal Cleaning Waste Pond, but if background constituent levels cannot be met, a request for an alternate closure will be made to demonstrate that the removed material is below the level based on indicator parameters in the soil. If it can be shown that this level will be adequately protective of human health and the environment (including groundwater), then a request will be made that the LDEQ decrease or eliminate the post-closure period. Within 90 days after such a closure is completed, a mortgage and conveyance records document will be entered to the parish for the property, a notation stating that solid waste remains at the site and providing the indicator levels obtained during closure.

Cleco understands that the LDEQ will release the closure fund to them upon determination that the facility has completed closure in accordance with the approved plan.

K. **Facility Post-closure. Standards governing post-closure requirements are contained in LAC 33:VII.711.F (Type I and II landfills), LAC 33:VII.713.F (Type I and II surface impoundments), LAC 33:VII.715.F (Type I and II landfarms), and LAC 33:VII.721.E (Type III construction and demolition debris and woodwaste landfills).**

Cleco acknowledges the regulations of this subsection. Cleco will not be governed by post-closure standards after a clean closure determination has been reached by the LDEQ, as stated in LAC 33:VII.713.E.3.b. Therefore, LAC 33:VII.521.K is not applicable.

APPENDIX N

FINANCIAL ASSURANCE AND ANNUAL REPORT

A subsidiary of Cleco Corporation
PO Box 5000
Pineville, LA 71361-5000
www.cleco.com

Cleco Power LLC

CLECO

March 30, 2005

Office of the Secretary
Louisiana Department of Environmental Quality
P. O. Box 4312
Baton Rouge, LA 70821-4312

SUBJECT: Demonstration of Financial Responsibility Fiscal Year 2004

Gentlemen:

I am the chief financial officer of Cleco Power LLC (Cleco Power), 2030 Donahue Ferry Road, Pineville, Louisiana 71360. This letter is in support of this firm's use of the financial test to demonstrate financial responsibility for liability coverage and closure and post-closure care, as specified in LAC 33:VII.727.A.1 and A.2.

The firm identified above is the permit holder of the following solid waste facilities, whether in Louisiana or not, for which liability coverage is being demonstrated through the financial test specified in LAC 33:VII.727.A.1. The amount of annual aggregate liability coverage covered by the test is shown for each facility:

Dolet Hills Power Station, Site Identification Number GD-031-1551; $1,000,000

Surge and Auxiliary Surge Ponds	P-0038
Metal Cleaning Waste Pond	P-0039
Bottom Ash Disposal Pond	P-0037
Plant Discharge Collection Pond	P-0040
Lignite Pile Runoff Pond	P-0041
Fly Ash/Scrubber Sludge Landfill and Surface Impoundment	P-0064

Rodemacher Power Station, Site Identification Number GD-079-0390; $1,000,000

Coal Sedimentation Pond	P-0062
Unit 2 Boiler Waste Cleaning Pond	P-005
Bottom Ash Pond	P-005
Fly Ash Pond	P-005
Metal Cleaning Waste Pond	P-0027

The firm identified above is the permit holder of the following solid waste facilities, whether in Louisiana or not, for which financial assurance for closure and post-closure is demonstrated through a financial test similar to that specified in LAC 33:VII.727.A.2 or other forms of self-insurance. The current closure and post-closure cost estimates covered by the test are shown for each facility:

Dolet Hills Power Station, Site Identification Number GD-031-1551

Facility Name	Closure Cost	Post-Closure Cost
Surge and Auxiliary Surge Ponds	$ 179,762	$ -0-
Metal Cleaning Waste Pond	$ 179,672	$ -0-
Bottom Ash Disposal Pond	$1,626,260	$215,715
Plant Discharge Collection Pond	$ 143,809	$ -0-
Lignite Pile Runoff Pond	$ 74,302	$ -0-
Fly Ash/Scrubber Sludge Landfill and Impoundment	$1,381,422	$179,762

Rodemacher Power Station, Site Identification Number GD-079-0390

Facility Name	Closure Cost	Post-Closure Cost
Coal Sedimentation Pond	$ 239,684	$ -0-
Unit 2 Boiler Cleaning Waste Pond	$ 107,859	$ -0-
Bottom Ash Pond	$1,006,675	$107,859
Fly Ash Pond	$2,756,373	$151,002
Unit 1 Metal Cleaning Waste Pond	$ 29,959	$ -0-

This firm guarantees through a corporate guarantee similar to that specified in LAC 33:VII.727.A.1 and 2, liability coverage, closure and post-closure care of the following solid waste facilities, whether in Louisiana or not, of which Cleco Power is a subsidiary of this firm. The amount of annual liability coverage covered by this guarantee for each facility and/or the current cost estimates for the closure and/or post-closure care so guaranteed is shown for each facility:

NONE

This firm is the owner or operator of the following solid waste facilities, whether in Louisiana or not, for which financial assurance for liability coverage, closure and/or post-closure care is not demonstrated either to the U. S. Environmental Protection Agency or to a State through a financial test or any other financial assurance mechanism similar to those specified in LAC 33:VII.727.A.1 and /or 2. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility:

NONE

This firm is required to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed year, ended December 31, 2003.

1.	Sum of current closure and post-closure cost estimates:	$ 8,380,201
2	Amount of annual aggregate liability coverage to be demonstrated:	$ 2,000,000
3.	Sum of lines 1 and 2:	$ 10,380,201
4.	Current bond rating of most recent issuance and name of rating service:**	Moody A_3 S&P BBB+
5.	Date of issuance of bond:	March 15, 1990
6.	Date of maturity of bond:**	March 15, 2005

**Both Moody's Investor Services and Standard & Poors continue to provide a secured debt rating on this firm even though no bonds have recently been issued. The ratings shown above are the ratings currently in effect.

7.	Tangible net worth (If any portion of the closure and/or post closure cost estimates is included in the "total liabilities" in your firm's financial statements, you may add that portion to this line)	$ 439,695,000
8.	Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.):	

NOT APPLICABLE

		YES	NO
9.	Is line 7 at least $10 million?	X	
10.	Is line 7 at least 6 times line 3?	X	
11.	Are at least 90% of assets located in the U.S.? If not, complete line 12.	X	
12.	Is line 8 at least 6 times line 3?	N/A	

I hereby certify that the wording of this letter is identical to the wording specified in LAC 33:VII.727.A.2.i.iv.(c).

Yours very truly,

CLECO POWER LLC

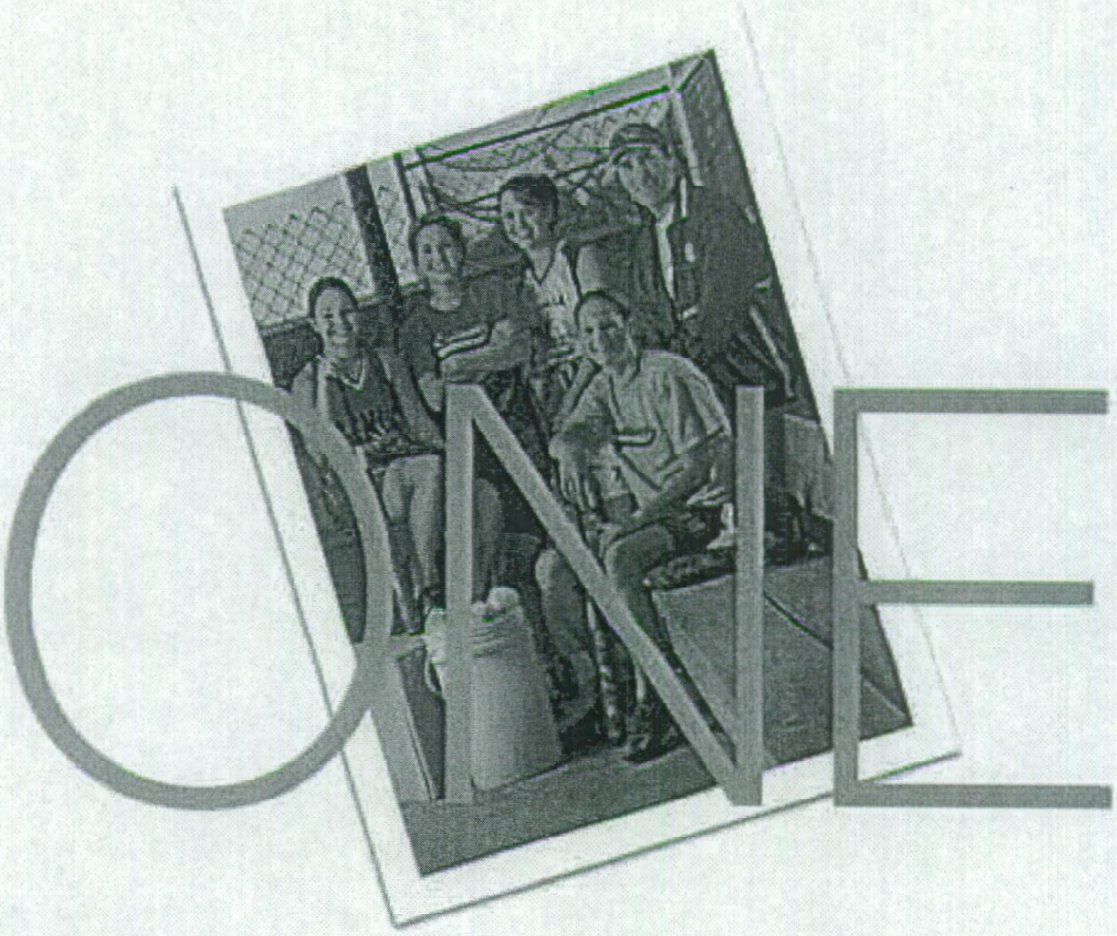
BY: Dilek Samil

Dilek Samil
Sr. Vice President & Chief Financial Officer

Date: 3-30-2005

cc: Mr. Doug Beck - PricewaterhouseCoopers LLP

Cleco Corporation
2005 Summary Review



ONE Memorable Year

Last year was memorable for one obvious reason: the devastation wrought by hurricanes Katrina and Rita on Louisiana and the Gulf Coast. Just as unforgettable were the efforts of tens of thousands of volunteers who came from across the nation to help our local officials start rebuilding their communities.

These deadly storms left significant numbers of our customers without power for days on end and posed a challenge for our employees as they worked to repair heavily damaged transmission and distribution systems. Their efforts exceeded all expectations. It earned Cleco another national award for storm restoration work. Gulf Coast residents are still feeling the effects of Katrina and Rita, but we're quickly getting back on our feet.

Not to be overlooked is the progress Cleco made during 2005 toward achieving key objectives, such as securing a reliable, stable-priced source of power for our customers, continuing our highly active role in economic development throughout our service territory, and positioning our company as a leader in customer satisfaction and service reliability. Indeed, perhaps our most notable achievement in 2005 was being able to devote extraordinary resources to hurricane recovery while executing our long-term strategies.

It is more important than ever that we continue to focus on building lasting value for our customers and our shareholders. The following pages offer some examples of our initiatives and how they helped make 2005 one very memorable year.

ABOUT THE COVER

The year 2005 was made memorable by a thousand small stories that left an indelible impression on everyone affected by the year's storms. For example, Alexandria Senior High softball coach Mark Rosier (far right) and leaders of Alexandria Dixie Girls Softball saw a need to help hurricane victims. Within seven days, they organized a 28-team tournament that raised $3,200 for storm victims. Athletes from across central Louisiana donated their time, including (from left) Jill Paulk of Pineville, Hillary LaCroix of Alexandria, Amy Phillips of Woodworth, and Patricia Whitstine of Alexandria.

Relentless Focus

Building a reliable, environmentally sound power source for Louisiana is at the heart of our strategy to meet customers' long-term needs for affordable electricity. The planned $1 billion investment in a 600-megawatt solid-fuel unit at our Rodemacher Power Station will diversify our fuel mix and enable us to cut customers' costs. It will help ambitious Louisiana entrepreneurs such as Allen and Marie Davis, owners of New Iberia's Taste N Sea restaurant, expand their business and create jobs. "We have the same goal as Cleco," Allen said. "We want to give customers the best service possible at an affordable price. It's how you build a lasting business." And it's why Cleco sees the new Rodemacher unit as the foundation for our company's long-term growth. Our plans call for the unit, which will incorporate the fuel flexibility of circulating fluidized-bed technology, to be under construction in the spring of 2006 and operational in late 2009.

Vision for Louisiana

Developing a strong, diverse economy for Louisiana is a priority. It's not without challenges, but Cleco is working to make that vision a reality across our service territory. Through long-standing partnerships with public and private entities, we expect to continue building on our accomplishments. We've been a key player in persuading a number of businesses to expand and others to locate in our region. Perhaps the biggest achievement was helping bring Union Tank Car Co. and its 850 jobs to central Louisiana. In fact, an article in the May 2005 edition of *Site Selection* magazine listed the Union Tank Car plant as one of the top 10 economic development deals in the nation for 2004. The same magazine followed up that article in September 2005 by ranking Cleco one of the top 10 utilities in the country because of our 2004 success in attracting total investment and new jobs on a per capita basis. With the economic development and industrial marketing work we've done over the last two years, we will have added roughly 55 megawatts of new load to our system by 2007. Economic development obviously expands our business, but it means more than that to us. It's part of our commitment to the communities we serve.

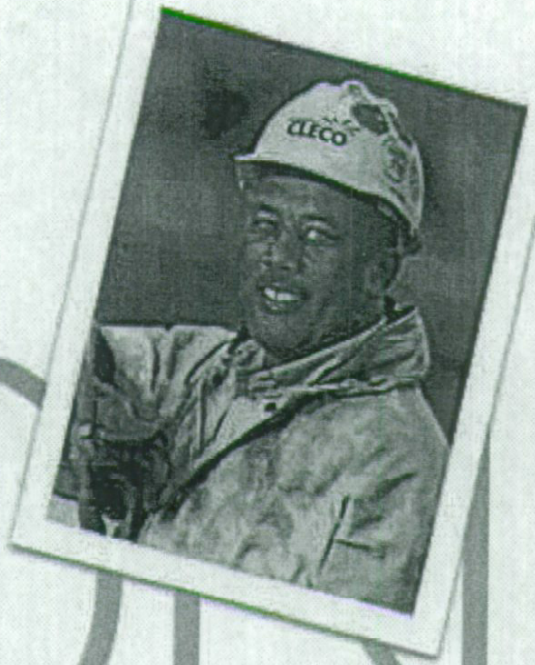
Customer at a Time

Our customers want and deserve excellent service and reliability. That's what we deliver — all day, every day. It comes down to building good relationships, knowing our customers' individual needs, and making sure we meet them. Reliability and superior power quality are crucial for the advanced biomedical research conducted at the Tulane National Primate Research Center in St. Tammany Parish, for example. By working together, we help ensure operations at the center continue uninterrupted. Providing outstanding service to residential customers such as the Robinson family of Pineville is just as important. It's why we're constantly working to improve our performance. The average duration of outages dropped by roughly 30 percent during 2005 — not counting the hurricanes — and again easily beat state standards. We also live up to our commitment to serve the needs of all of our customers. In 2005, we donated $200,000 to community action agencies across our service territory to help customers struggling to meet the rising costs of energy and other necessities. We also gave more than $425,000 to various local charities and organizations.


Altec

Unforgettable Month

Hurricanes Katrina and Rita were catastrophes that tested the resources of our company and the resolve of our employees. Just as we were close to wrapping up restoration work after the devastating blow Katrina dealt our service area north of New Orleans on Aug. 29, Rita struck Sept. 24, hitting every part of our service territory. The numbers tell the story: 29 days to restore power to 86,403 customers affected by Katrina; 14 days to restore lights to 136,584 customers affected by Rita; 378,622 calls to our call center; 6,022 poles replaced; 3,032 transformers replaced; 4,230 miles of distribution lines repaired or replaced; 612 miles of transmission line reenergized; 2,878 employees and contractors repaired damage from Katrina; 2,435 employees and contractors repaired damage from Rita; and $300,000 was donated by the company — along with thousands more from employees and national and international donors — to create the Cleco EmPowers Fund for storm victims. Our employees once again showed their determination and dedication when faced with a challenge. As one person wrote in a note of thanks: "Our hats are off to Cleco and crews for a monumental job well done."



ONE of the Nation's Best

Cleco's customer satisfaction ranked among the best in the country, according to a 2005 national survey of residential customers. It's the third year in a row we finished among the top investor-owned utilities. You don't achieve results like that without extraordinary employees such as Nate Wilson, lead line mechanic in the Slidell area. In addition, during 2005 the nation's retail chains named Cleco among the utilities that offer the best overall customer service. Our own research backs up the honors. The number of very satisfied Cleco customers was 16 points higher for Cleco than for the average Louisiana utility. But we're not satisfied yet. Every employee is committed to building trust, to delivering on our promises, and to taking extra steps so we can better meet all of our customers' needs.

Dear Shareholders,

For everyone in Louisiana, 2005 was indeed a memorable year. Facing unprecedented challenges posed by hurricanes Katrina and Rita, Louisiana residents and Cleco employees demonstrated an amazing resilience.

Hundreds of our employees joined outside contractors to create a team of thousands who worked nonstop over six weeks to restore power to more than 220,000 customers affected by the storms. It was the largest restoration effort in our company's history, and it earned Cleco national recognition. We received the Edison Electric Institute's (EEI) prestigious Emergency Response Award. This was the fourth straight year our peers honored us for storm response work.

It is wonderful to be recognized nationally, but we are even more proud to be honored locally. We were named business of the year by the St. Tammany West Chamber of Commerce. That honor was particularly meaningful, because it was given by our hardest-hit customers.

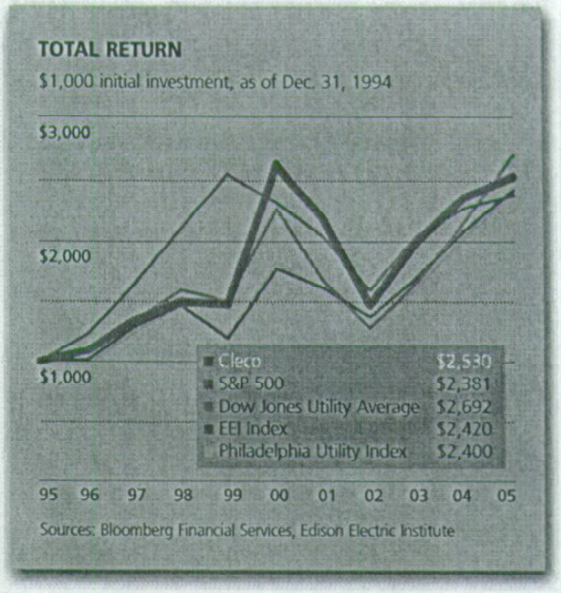
Michael H. Madison
President and
Chief Executive Officer
Cleco Corporation

Even with the extraordinary events of 2005, we accomplished major objectives, tackled a variety of issues, and continued executing our strategy for long-term growth.

My pride in being part of this company increases each day, as does my confidence in the abilities of my co-workers to carry out our plans.

We begin 2006 with straightforward objectives.

- Moving ahead with a $1 billion investment in a new solid-fuel generating unit to diversify our fuel mix and provide customers with lower, more stable fuel costs
- Building on our superior customer service
- Expanding the utility through economic development
- Maintaining our financial strength



My belief in our ability to carry out our plans is firmly rooted in my appreciation of the expertise and leadership skills of our management team. It's been almost a year since I took over as Cleco's president and chief executive officer, and I've had the good fortune to have Dilek Samil, our former chief financial officer, running our regulated utility and Kathleen Nolen, our former treasurer, serving as chief financial officer. Their experience and hard work, along with the talents of our entire work force, helped make this challenging year a success.

Among 2005 events, we:

- Earned $3.53 per diluted share, $1.42 per share excluding the earnings from the Perryville transactions explained below.
- Completed the sale of both the Perryville plant and our claims in the related Mirant bankruptcy case, which, net of the project's losses since January 2004, contributed $2.11 per diluted share toward 2005 earnings. If you'll recall, we posted impairment charges associated with Perryville of $1.94 per share in 2003. We're proud of the value we were able to capture from Perryville given the obstacles we faced along the way.
- Improved financial strength by reducing debt $395 million over the last three years, including project-related debt.
- Continued to offer solid, long-term value to shareholders. On a 10-year basis, our stock's total return performance is in line with the major utility indices and better than the Standard & Poor's 500. (See "Total Return" chart above.)
- Finished 2005 in the top quartile of all EEI companies for lowest rate of personal injuries and vehicle collisions. It was the sixth straight year our incident rate of Occupational Safety and Health Administration-recordable injuries put us in EEI's top quartile. Helping us reach that achievement were employees at our Teche Power Station and Patterson Work Center who completed an amazing 18 years and 17 years, respectively, without a lost-time injury. It's that kind of dedication to safety we're trying to instill across Cleco through our Target Zero program.
- Initiated efforts to limit the impact of the late December bankruptcy filing of Calpine Corp., our partner in the Acadia power plant. Calpine Energy Services, L.P.'s request in bankruptcy court to reject the Acadia tolling agreements is pending as this letter is being written; however, we are working to offset the effect of any such action. The partnership restructurings we put in place in 2003 and 2005 will help enhance Cleco's value in the plant assuming we must market its output.
- Worked to manage fuel costs in the face of record high natural gas prices. We relied heavily on our Dolet Hills Power Station and Rodemacher Power Station solid-fuel units. Their equivalent availability factor was a combined 87.39 percent in 2005, superior to industry standards. These plants consistently meet or beat industry availability benchmarks, which include many units that use higher grades of coal and have less complex environmental controls.

Fuel Diversity

Even with the good performance of our solid-fuel plants, two-thirds or more of the electricity Cleco sells is produced from or directly tied to natural gas. Although the hurricanes contributed to a tremendous run-up in natural gas prices, it's clear that Cleco and Louisiana need to reduce a long-standing reliance on natural gas. We cannot allow our residential customers and Louisiana businesses to be so heavily dependent on a fuel with a price expected to remain high and volatile well into the future. We must increase our fuel diversity.

That's why we're moving ahead with plans to construct a 600-megawatt solid-fuel unit — among the cleanest units of its type in the nation — at our Rodemacher plant near Boyce, La. The proposed project is the result of a solicitation process overseen by an independent monitor and completed in consultation with the staff of the Louisiana Public Service Commission (LPSC). The project has earned support from a variety of community and political leaders.

Benefits for Louisiana

Our $1 billion investment offers both a short- and long-term economic benefit for Louisiana. We've contracted with a subsidiary of Louisiana-based The Shaw Group to build the plant. And we expect 1,200 people to be employed at the peak of construction. That's in addition to the approximately 80 people we anticipate hiring to run the unit. But the key to the project is the expected future fuel savings our customers will realize. We believe the plant will lower our customers' costs, strengthen Cleco's competitive position, and provide a long-term platform for the growth of our company and our service area.

The unit's circulating fluidized-bed technology will give it the flexibility to burn a variety of fuels. But our primary fuel of interest is petroleum coke, or pet coke. A byproduct of the oil refining process, pet coke is produced in abundant quantities in Louisiana and the Gulf Coast region. We are exploring the possibility of barging pet coke along Louisiana's rivers, helping fulfill the economic promise of the Red River.

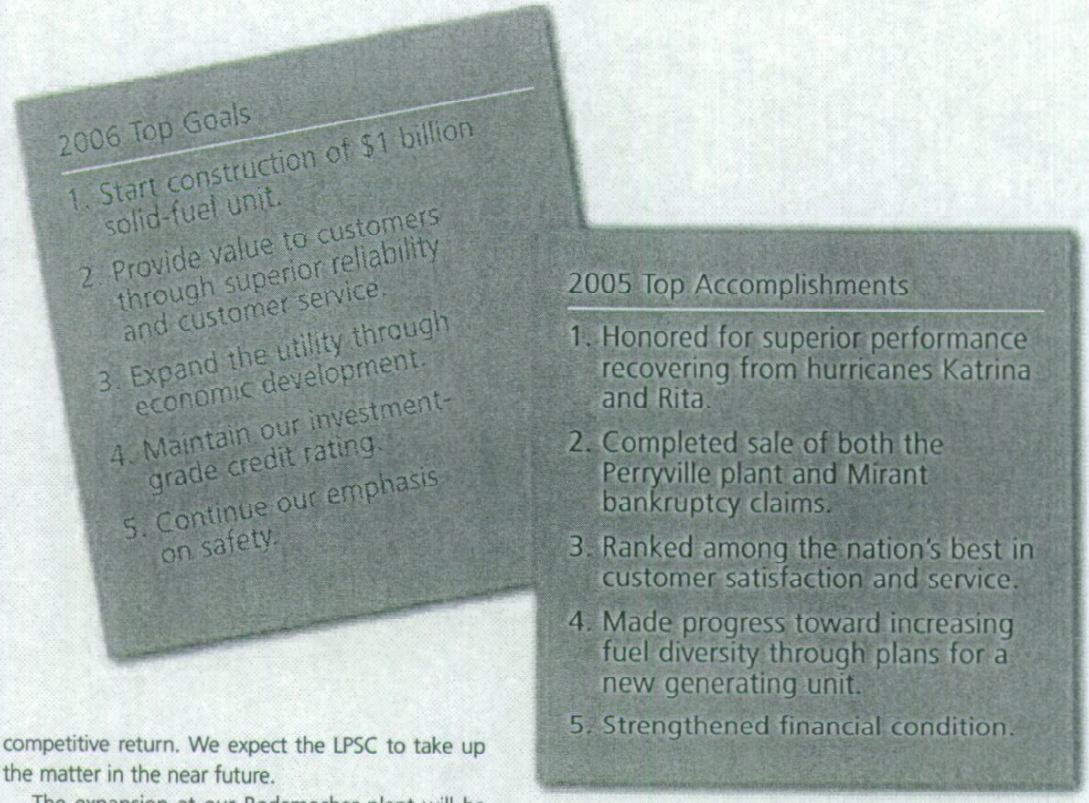
LPSC Approval

We have received final LPSC approval of our plan to build the unit, and we are working to wrap up outstanding issues so construction can start in April. The lack of opposition to our air permit application speaks to the effectiveness of the environmental controls in our design. We are proud of the progress we've made on the environmental front and proud of the affirmation by our regulators that our plan is what's best for customers.

We believe the LPSC's decision to allow us to recover an amount equal to approximately 75 percent of the carrying costs of funds used to build the unit is an example of the regulatory commitment to diversifying the state's fuel mix. And their approval of a plan allowing us to recover our storm restoration costs over a 10-year period shows their understanding of our financial needs while we build the unit.

In order to balance customer and shareholder interests, the LPSC staff proposed modifications to our rate plan in its recommendation for approval of the project and recovery of storm costs. Our maximum regulated rate of return on equity will be 12.25 percent through Sept. 30, 2006. From that point through the start of plant operations, currently expected to be in late 2009, the staff-proposed regulated return on equity will be set at 11.25 percent. After Oct. 1, 2006, the staff's plan creates a mechanism for us to return to customers 60 percent of earnings between 11.25 percent and 12.25 percent. Customers will receive all earnings above the 12.25 percent level. Although our rate plan will change, the proposal still provides a

* Excluding the $2.11 per share impact of the reconsolidation of Perryville, Cleco Corporation would have earned $1.42 per share for 2005.



competitive return. We expect the LPSC to take up the matter in the near future.

The expansion at our Rodemacher plant will be the biggest project in Cleco's history. It will require an extraordinary commitment of resources.

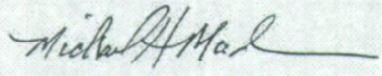
Although that investment is large, you can be certain our company will continue to fund prudent expenditures to improve the performance, safety, and reliability of our existing system. A good example is the Wells Substation. We joined with another utility to invest approximately $20 million building a transmission substation to strengthen the reliability of the south Louisiana grid. Thanks to the work of our transmission group, the substation was completed well ahead of schedule, and its performance has exceeded all expectations.

Our employees exceed all expectations too. Their creativity and work ethic are unmatched. They thrive on challenges. The year's storms amplified those traits and provided many examples of our employees' kindness and commitment to helping the people we serve. Dozens of employees whose own homes were damaged by the storms set aside their problems to restore power to their communities. That created a sense of hope for friends and neighbors surrounded by destruction. It is a privilege to work with such people.

I also consider it an honor to have worked with David Eppler, who retired as president and CEO in mid-2005. David's energy and intelligence contributed greatly to Cleco's success during his 23 years with the company. In addition, I would like to give my thanks to Ray Nesbitt, who is leaving our board of directors at our annual meeting, having reached the mandatory retirement age of 72. His expertise has been invaluable to Cleco since he joined the board in 2001.

The wise guidance of our board and the hard work and dedication of our employees allow us to build on Cleco's long record of delivering value to our customers and shareholders.

Thank you for your continued investment and confidence in our future.



Michael H. Madison
President and Chief Executive Officer
Cleco Corporation

Feb. 28, 2006

CLECO CORPORATION

Financial Highlights

(DOLLARS IN THOUSANDS)	YEAR ENDING DEC. 31 2005 (1)	2004 (2)	2003 (3)	5-YEAR COMPOUND %CHANGE
Financial Data				
Total operating revenue, net	$ 920,154	$ 745,817	$ 803,452	6.63 %
Operating income (loss)	$ 111,734	$ 101,138	$ (11,547)	(5.23)%
Equity income from investees	$ 218,441	$ 47,250	$ 31,391	—
Net income (loss) applicable to common stock	$ 180,779	$ 63,973	$ (36,790)	23.43 %
Consolidated total assets	$ 2,149,488	$1,837,063	$2,159,426	4.19 %
Capital expenditures	$ 187,393	$ 79,873	$ 74,511	(2.31)%
Consolidated long-term debt as percentage of capitalization	46.33 %	44.54 %	64.40 %	(4.35)%
Shareholder Value				
Average shares of common stock outstanding, basic	49,486,790	47,371,319	46,820,058	1.94 %
Average shares of common stock outstanding, diluted	51,760,220	47,528,886	46,820,058	2.83 %
Earnings (loss) per share, basic	$ 3.54	$ 1.33	$ (0.79)	21.09 %
Earnings (loss) per share, diluted	$ 3.53	$ 1.32	$ (0.79)	21.02 %
Dividends paid per common share	$ 0.900	$ 0.900	$ 0.900	1.27 %
Return on average common equity	29.4 %	12.5 %	(7.0)%	16.00 %
Book value per average common share	$ 13.87	$ 11.44	$ 10.31	6.05 %
Market price at year-end	$ 20.85	$ 20.26	$ 17.98	(5.30)%
Dividend yield at year-end	4.3 %	4.4 %	5.0 %	6.76 %

Consolidated Diluted Earnings (Loss) Per Share Allocated to Subsidiaries

	YEAR ENDING DEC. 31 2005	2004	2003 (3)
Subsidiary			
Cleco Power LLC	$ 1.15	$ 1.08	$ 1.22
Cleco Midstream Resources LLC	$ 2.39	$ 0.37	$ (1.72)
Other (including Corporate)	$ (0.01)	$ (0.13)	$ (0.18)
Consolidated earnings (loss) from continuing operations allocated to subsidiaries	$ 3.53	$ 1.32	$ (0.68)
Discontinued operations	$ —	$ —	$ (0.11)
Net earnings (loss) applicable to common stock	$ 3.53	$ 1.32	$ (0.79)

(1) The deconsolidation of Perryville Energy Partners, LLC, and Perryville Energy Holdings LLC (PEH) from Cleco in connection with their bankruptcy filings affected Midstream's earnings for 2004 compared to 2003, since no income or loss associated with those subsidiaries was recognized in Midstream's consolidated financial statements subsequent to the bankruptcy filing on Jan. 28, 2004. An order confirming PEH's and Perryville's plan of reorganization became effective Oct. 11, 2005. As a result, Cleco recorded its investment in Perryville on the equity method of accounting and PEH's results from Jan. 28, 2004, to Oct. 11, 2005, were reconsolidated with Cleco. Perryville's revenue and expenses from Jan. 28, 2004, to Oct. 11, 2005, were netted and reported as equity income from investees on Cleco Corporation's Consolidated Statements of Operations. Perryville's assets and liabilities are represented by one line item corresponding to Cleco's investment in Perryville on Cleco Corporation's Consolidated Balance Sheets.

(2) Cleco deconsolidated Evangeline from its financial statements and began reporting its investment in Evangeline on the equity method of accounting. As a result, effective March 31, 2004, the assets and liabilities of Evangeline are no longer reported on Cleco Corporation's Consolidated Balance Sheets, but instead are represented by one line item corresponding to Cleco's equity investment in Evangeline. Effective April 1, 2004, Evangeline revenue and expenses are netted and reported as equity income from investees on Cleco Corporation's Consolidated Statements of Operations.

(3) 2003 results include asset-impairment charges associated with the Perryville project, which totaled $91.0 million after-tax, or $1.94 per share.

CLECO CORPORATION

Five-Year Selected Financial Data (Unaudited)

(THOUSANDS, EXCEPT SHARE, PER SHARE, PERCENTAGES, AND RATIOS)	2005	2004	2003	2002	2001
Operating revenue (excluding intercompany revenue)					
Cleco Power	$ 911,971	$ 727,449	$ 705,079	$ 593,781	$ 622,722
Midstream	4,984	14,844	97,129	98,693	64,791
Other	3,199	3,524	1,244	57	113
Total	$ 920,154	$ 745,817	$ 803,452	$ 692,531	$ 687,626
Total operating expenses (excluding fuel and power purchases)	$ 233,838	$ 223,259	$ 418,287	$ 234,431	$ 221,022
Allowance for funds used during construction	$ 1,446	$ 2,478	$ 1,928	$ 2,116	$ (409)
Federal and state income tax expense (benefit)	$ 115,951	$ 35,864	$ (21,417)	$ 39,665	$ 39,170
Income (loss) from continuing operations before income taxes	$ 298,929	$ 101,983	$ (51,185)	$ 120,038	$ 113,657
Net income (loss) applicable to common stock	$ 180,779	$ 63,973	$ (36,790)	$ 70,003	$ 68,362
Basic earnings (loss) per share from continuing operations	$ 3.54	$ 1.33	$ (0.68)	$ 1.65	$ 1.57
Basic earnings (loss) per share applicable to common stock	$ 3.54	$ 1.33	$ (0.79)	$ 1.47	$ 1.47
Diluted earnings (loss) per share from continuing operations	$ 3.53	$ 1.32	$ (0.68)	$ 1.65	$ 1.56
Diluted earnings (loss) per share applicable to common stock	$ 3.53	$ 1.32	$ (0.79)	$ 1.47	$ 1.47
Return on average common equity	29.4 %	12.5 %	(7.0)%	13.3 %	14.3 %
Effective tax rate	38.8 %	35.2 %	41.8 %	33.0 %	34.5 %
Capital expenditures (adjustments of)					
Cleco Power	$ 186,441	$ 78,700	$ 68,507	$ 87,321	$ 45,642
Midstream	13	(142)	4,843	98,064	136,284
Other (after allocation to Cleco Power and Midstream)	939	1,315	1,161	(1,260)	529
Total	$ 187,393	$ 79,873	$ 74,511	$ 184,125	$ 182,455
Internal cash generation (% of capital expenditures)					
Cleco Power	67.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Midstream	100.0 %	100.0 %	100.0 %	56.4 %	19.2 %
Other	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Property, plant and equipment, net — Cleco Power					
Production	$ 178,214	$ 192,456	$ 199,013	$ 209,765	$ 218,802
Transmission	$ 257,385	$ 250,473	$ 248,003	$ 243,986	$ 236,009
Distribution	$ 640,924	$ 493,119	$ 476,183	$ 460,636	$ 428,477
Other	$ 104,012	$ 115,147	$ 105,506	$ 98,693	$ 93,661
Capitalization					
Common shareholders' equity	52.15 %	53.56 %	34.27 %	38.83 %	43.36 %
Preferred stock	1.52 %	1.90 %	1.33 %	1.21 %	1.41 %
Long-term debt	46.33 %	44.54 %	64.40 %	59.96 %	55.23 %
Common shareholders' equity	$ 686,229	$ 541,838	$ 482,750	$ 562,470	$ 491,966
Preferred stock	$ 20,034	$ 19,226	$ 18,717	$ 17,508	$ 15,988
Long-term debt	$ 609,643	$ 450,552	$ 907,058	$ 868,684	$ 626,778
Short-term debt	$ 40,000	$ 160,000	$ 205,705	$ 360,701	$ 210,398
Total consolidated debt	$ 649,643	$ 610,552	$1,112,763	$1,229,385	$ 837,176
Equity investment in investees	$ 317,762	$ 314,284	$ 264,073	$ 272,991	$ 226,427
Total assets	$2,149,488	$1,837,063	$2,159,426	$2,344,556	$1,767,890
Total liabilities	$1,443,225	$1,275,999	$1,657,958	$1,764,578	$1,301,549
Embedded cost of debt	6.49 %	7.29 %	7.15 %	6.67 %	8.08 %
Ratio of earnings to fixed charges (pre-tax)	6.31	2.95	0.43	2.65	2.77
Total return to shareholders	7.2 %	18.3 %	35.9 %	(32.9)%	(16.5)%
Average shares outstanding for year, basic	49,486,790	47,371,319	46,820,058	46,245,104	45,000,955
Average shares outstanding for year, diluted	51,760,220	47,528,886	46,820,058	46,292,058	47,763,713
Market price per share at year-end	$ 20.85	$ 20.26	$ 17.98	$ 14.00	$ 21.97
Market capitalization at year-end	$1,036,745	$ 997,521	$ 843,244	$ 658,490	$ 987,793
Price-earnings ratio at year-end	5.9	15.2	(22.8)	9.5	15.0
Market-to-book ratio at year-end	1.5	1.8	1.7	1.2	2.0
Book value per share at year-end	$ 13.87	$ 11.44	$ 10.31	$ 12.16	$ 10.93
Cash dividends paid per common share	$ 0.900	$ 0.900	$ 0.900	$ 0.895	$ 0.870
Dividend payout ratio	25.4 %	67.7 %	(113.9)%	61.2 %	59.2 %
Dividend yield at year-end	4.3 %	4.4 %	5.0 %	6.4 %	4.0 %

CLECO CORPORATION

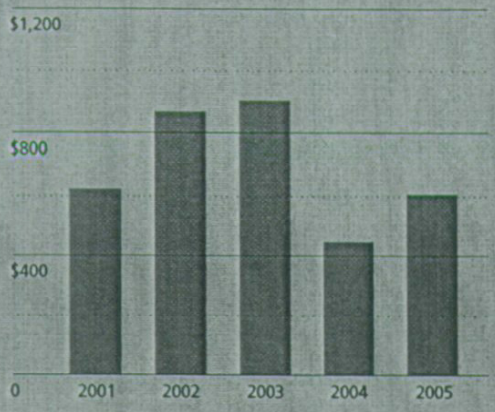
Five-Year Selected Operating Data (Unaudited)

(THOUSANDS, EXCEPT PERCENTAGES AND RATIOS)	2005	2004	2003	2002	2001
Nonfuel recovery revenue by customer class — Cleco Power					
Residential	$154,928	$153,607	$149,755	$148,544	$140,547
Commercial	70,547	70,116	67,950	66,212	64,127
Industrial	54,966	54,978	55,098	55,033	52,578
Other	41,360	39,284	37,964	34,400	29,641
Unbilled	622	48	1,212	1,194	1,012
Total	$322,423	$318,033	$311,979	$305,383	$287,905
Sales of electricity (millions of kilowatt-hours) — Cleco Power					
Residential	3,516	3,507	3,429	3,400	3,201
Commercial	1,838	1,854	1,781	1,722	1,655
Industrial	2,861	2,902	2,786	2,756	2,640
Other retail	610	597	595	593	581
Unbilled	18	(3)	39	30	34
Total retail	8,843	8,857	8,630	8,501	8,111
Sales for resale	552	1,057	1,066	715	398
Total retail and wholesale customer sales	9,395	9,914	9,696	9,216	8,509
Average retail customers by class — Cleco Power					
Residential	227,799	225,949	221,778	219,503	216,809
Commercial	32,161	31,937	31,429	30,477	29,749
Industrial	674	692	700	712	722
Other	6,401	6,272	6,210	6,153	6,113
Total	267,035	264,850	260,117	256,845	253,393
Average revenue per kWh sold — Cleco Power					
Residential	$ 0.1009	$ 0.0850	$ 0.0815	$ 0.0729	$ 0.0814
Commercial	$ 0.0952	$ 0.0788	$ 0.0760	$ 0.0675	$ 0.0764
Industrial	$ 0.0722	$ 0.0567	$ 0.0541	$ 0.0466	$ 0.0553
Other, including unbilled	$ 0.1171	$ 0.0664	$ 0.0649	$ 0.0566	$ 0.0583
Total composite	$ 0.0931	$ 0.0724	$ 0.0697	$ 0.0616	$ 0.0696
Average annual kWh use per residential customer — Cleco Power	15,435	15,521	15,461	15,490	14,764
Average annual revenue per residential customer — Cleco Power	$ 1,557	$ 1,319	$ 1,260	$ 1,129	$ 1,202
Degree-days — % change from normal:					
Heating	(17.2)%	(9.9)%	7.8 %	7.7 %	(4.8)%
Cooling	15.8 %	4.0 %	(2.3)%	4.0 %	(1.1)%
Capacity (MW)					
Cleco Power:					
Coal and lignite	482	482	482	482	482
Natural gas and oil	877	877	877	877	880
Firm capacity purchases	671	831	857	857	772
Midstream:					
Natural gas — 718-MW sold in 2005	1,355	2,073	2,073	2,061	848
Total	3,385	4,263	4,289	4,277	2,982
Peak demand (MW) — Cleco Power	2,014	1,940	1,990	1,937	1,850
Generation (MWh) — Cleco Power					
Net generation — system plants	5,284	4,820	5,044	5,405	5,536
Purchased power	5,028	5,592	5,134	4,482	3,739
Total energy supply	10,312	10,412	10,178	9,887	9,275
Cost of fuel per kWh	$ 0.0588	$ 0.0404	$ 0.0375	$ 0.0285	$ 0.0358
Fuel Mix — Cleco Power					
Coal and lignite	33.9 %	31.6 %	31.9 %	32.6 %	33.0 %
Natural gas and oil	17.3 %	14.7 %	17.7 %	22.0 %	26.7 %
Purchased power	48.8 %	53.7 %	50.4 %	45.4 %	40.3 %
System annual load factor	57.2 %	60.0 %	58.2 %	59.5 %	57.2 %
System Average Interruption Duration Index (SAIDI) — Cleco Power (Average number of hours a customer's service is interrupted)	1.86	2.75	2.45	2.82	2.40
System Average Interruption Frequency Index (SAIFI) — Cleco Power (Average number of times a customer's service is interrupted)	1.86	2.02	1.94	2.09	1.82
Customer Satisfaction Percentage — Cleco Power	91 %	91 %	92 %	93 %	92 %
Number of employees	1,158	1,165	1,203	1,214	1,392

Financial Data (As of Dec. 31, 2005)

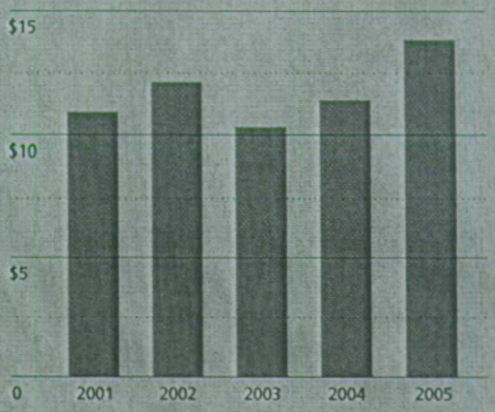
LONG-TERM DEBT

In millions of dollars



BOOK VALUE PER SHARE AT YEAR END

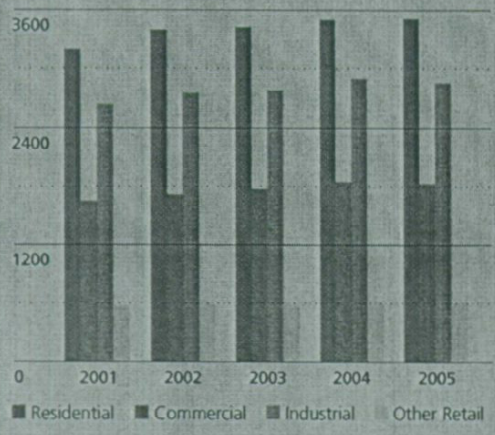
In dollars



Operating Data (As of Dec. 31, 2005)

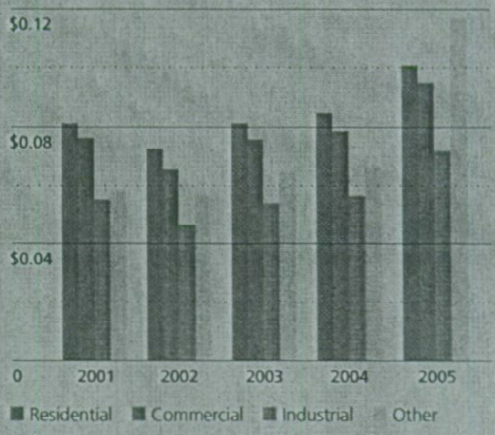
SALES OF ELECTRICITY
CLECO POWER

In millions of kilowatt hours



AVERAGE REVENUE PER KWH SOLD
CLECO POWER

In dollars



Company Profile

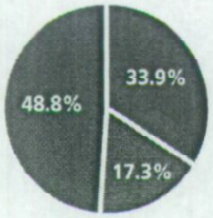
Cleco Corporation (NYSE: CNL), based in Pineville, La., is a regional energy services provider with two primary businesses: Cleco Power LLC, a regulated electric utility, and Cleco Midstream Resources LLC, a wholesale generation subsidiary.

Today, Cleco Power serves approximately 267,000 customers across Louisiana. It owns approximately 1,360 megawatts of regulated generating capacity.

Cleco Midstream has approximately 1,350 megawatts of wholesale generation assets in operation.

CLECO POWER FUEL SOURCES

- Coal and lignite
- Natural gas and oil
- Purchased power



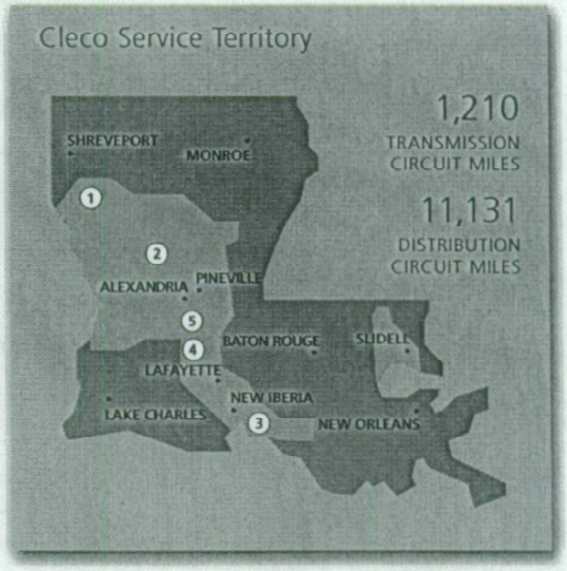
Energy Assets and Operations

REGULATED GENERATION
CLECO POWER LLC

		TOTAL CAPACITY (MW)	OWNERSHIP (PERCENT)	FUEL SOURCE
1	Dolet Hills	650	50	lignite
2	Rodemacher			
	Unit 1	440	100	gas/oil
	Unit 2	523	30	coal/gas
3	Teche	430	100	gas/oil

WHOLESALE GENERATION
CLECO MIDSTREAM RESOURCES LLC

		TOTAL CAPACITY (MW)	OWNERSHIP (PERCENT)	FUEL SOURCE
4	Acadia	1,160	50	gas
5	Evangeline	775	100	gas



Board of Directors (As of Dec. 31, 2005)

Sherian G. Cadoria
Age 65; Elected 1993
Brigadier General,
U.S. Army (retired)
Retired President,
Cadoria Speaker and
Consultancy Service, Mansura, La.
Member of the Audit, Nominating/Governance and Qualified Legal Compliance committees

Richard B. Crowell
Age 67; Elected 1997
Partner, law firm of Crowell & Owens, Alexandria, La.
Member of the Audit, Nominating/ Governance and Qualified Legal Compliance committees

J. Patrick Garrett
Age 62; Elected 1981
Retired President and Chief Executive Officer, Windsor Food Co., Ltd., Houston, Texas
Chairman of the board and chairman of the Executive, Nominating/ Governance and Qualified Legal Compliance committees

F. Ben James Jr.
Age 69; Elected 1986
President, James Investments Inc. (real estate development and international marketing), Ruston, La.
Member of the Audit and Compensation committees

Elton R. King
Age 59; Elected 1999
Retired President of network and carrier services group, BellSouth Telecommunications Inc., Atlanta, Ga. Also retired President and CEO of Visual Networks Inc.
Member of the Compensation and Finance committees

Michael H. Madison
Age 57; Elected 2005
President and Chief Executive Officer, Cleco Corp.
Member of the Executive Committee

William L. Marks
Age 62; Elected 2001
Chairman and Chief Executive Officer, Whitney Holding Corp. and Whitney National Bank, New Orleans, La.
Chairman of the Finance Committee and member of the Executive and Compensation committees

Ray B. Nesbitt
Age 72; Elected 2001
Retired President of Exxon Chemical Co., Houston, Texas
Member of the Compensation, Finance, Nominating/Governance and Qualified Legal Compliance committees

Robert T. Ratcliff Sr.
Age 63; Elected 1993
Chairman, President and Chief Executive Officer, Ratcliff Construction Company LLC, Alexandria, La.
Member of the Audit, Nominating/Governance and Qualified Legal Compliance committees

William H. Walker Jr.
Age 60; Elected 1996
Retired Chairman of Howard Weil Inc., New Orleans, La.
Chairman of the Compensation Committee and member of the Executive and Finance committees

W. Larry Westbrook
Age 66; Elected 2003
Retired Chief Financial Officer and Senior Risk Officer of Southern Company, Atlanta, Ga.
Chairman of the Audit Committee and member of the Executive and Finance committees

Officers (As of Dec. 31, 2005)

EXECUTIVE MANAGEMENT TEAM

Michael H. Madison
Age 57;
Joined Cleco in 2003
President and Chief Executive Officer, Cleco Corp.
Chief Executive Officer, Cleco Power LLC

Kathleen F. Nolen
Age 45;
Joined Cleco in 1983
Senior Vice President and Chief Financial Officer

Samuel H. Charlton III
Age 60;
Joined Cleco in 1997
Senior Vice President and Chief Operating Officer, Cleco Midstream Resources LLC

Dilek Samil
Age 50;
Joined Cleco in 2001
President and Chief Operating Officer, Cleco Power LLC

George W. Bausewine
Age 50;
Joined Cleco in 1986
Senior Vice President, Corporate Services

Douglas A. Bell
Age 51;
Joined Cleco in 1989
General Manager, Internal Audit Cleco Support Group LLC

R. O'Neal Chadwick Jr.
Age 45;
Joined Cleco in 2000
Senior Vice President and General Counsel

OTHER OFFICERS

Anthony L. Bunting
Age 46; Joined Cleco in 1992
Vice President of Customer Services and Energy Delivery, Cleco Power LLC

Stephen M. Carter
Age 46; Joined Cleco in 1988
Vice President of Regulated Generation, Cleco Power LLC

R. Russell Davis
Age 49; Joined Cleco in 2000
Vice President and Chief Accounting Officer

Jeffrey W. Hall
Age 54; Joined Cleco in 1981
Vice President of Governmental & Community Affairs

Mark H. Segura
Age 47; Joined Cleco in 1984
Vice President of Transmission & Distribution Services, Cleco Power LLC

William G. Fontenot
Age 42; Joined Cleco in 1986
Vice President of Regulated Generation Development, Cleco Power LLC

Keith D. Crump
Age 44; Joined Cleco in 1989
Treasurer

Judy P. Miller
Age 48; Joined Cleco in 1984
Corporate Secretary

Charles M. Murray
Age 45; Joined Cleco in 1986
Assistant Controller

Janice M. Mount
Age 62; Joined Cleco in 1984
Assistant Corporate Secretary

Shareholder Information

HEADQUARTERS
Cleco Corporation
2030 Donahue Ferry Road
P.O. Box 5000
Pineville, LA 71361-5000
(318) 484-7400
www.cleco.com

The Annual Meeting of Shareholders will be at 9 a.m. (Central time) on April 21, 2006, at the Best Western Inn and Suites and Convention Center of Alexandria, Plantation Room, 2720 West MacArthur Dr., Alexandria, La.

SHAREHOLDER ASSISTANCE
Toll-Free 1-800-253-2652
Representatives are available Monday through Friday, 8 a.m. to 5 p.m. (Central time).

Rodney J. Hamilton
Shareholder Relations Specialist

ANALYST CONTACTS
Keith D. Crump
Treasurer

Ryan T. Gunter
Manager of Investor Relations, Strategy and Budget

SEND INQUIRIES TO
Post:
Shareholder Services
Cleco Corporation
P.O. Box 5000
Pineville, LA 71361-5000

E-mail:
investors@cleco.com

COMMON STOCK LISTING
Cleco Corporation common stock is listed on the New York Stock Exchange (symbol: CNL).

DIVIDEND SCHEDULE
Schedule of anticipated common stock dividend record and payment dates for 2006:

Record Dates	*Payment Dates*
Feb. 6	Feb. 15
May 1	May 15
July 31	Aug. 15
Oct. 30	Nov. 15

DIVIDEND REINVESTMENT
The dividend reinvestment plan enables shareholders to reinvest dividends on both common and preferred stock into additional shares of common stock. Shareholders can also purchase shares of common stock through an optional cash investment feature. A brochure describing the plan and an enrollment form are available from Shareholder Services or the transfer agent.

OTHER MATERIALS
Copies of the proxy statement, other SEC filings and other corporate publications are available on request from Shareholder Services and through our Web site.

NYSE CEO CERTIFICATION
Cleco has filed the certification of its chief executive officer and chief financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 as exhibits to its Annual Report on Form 10-K for the year ended Dec. 31, 2005. In May 2005, Cleco's chief executive officer, as required by Section 303A.12(a) of the NYSE Listed Company Manual, submitted his certification to the NYSE that he was not aware of any violation by Cleco of the NYSE's corporate governance listing standards.

TRANSFER AGENT, REGISTRAR AND DIVIDEND AGENT
Common & Preferred Stock
Computershare Trust Company, N.A.
P.O. Box 43069
Providence, RI 02940-3069
Telephone: (781) 575-2723
www.computershare.com

TRUSTEE AND PAYING AGENT
Cleco Corporation Senior Notes
Cleco Evangeline LLC Bonds
J.P. Morgan Trust Company, National Association
1999 Avenue of the Stars, 26th Floor
Los Angeles, CA 90067-6033

TRUSTEE AND PAYING AGENT
Cleco Power LLC Senior Notes
Cleco Power LLC Medium-Term Notes
Cleco Power LLC Retail Notes
The Bank of New York
Corporate Trust Administration
10161 Centurion Parkway
Jacksonville, FL 32256

Cleco Corporation
2030 Donahue Ferry Road
P.O. Box 5000
Pineville, LA 71361-5000
(318) 484-7400
www.cleco.com